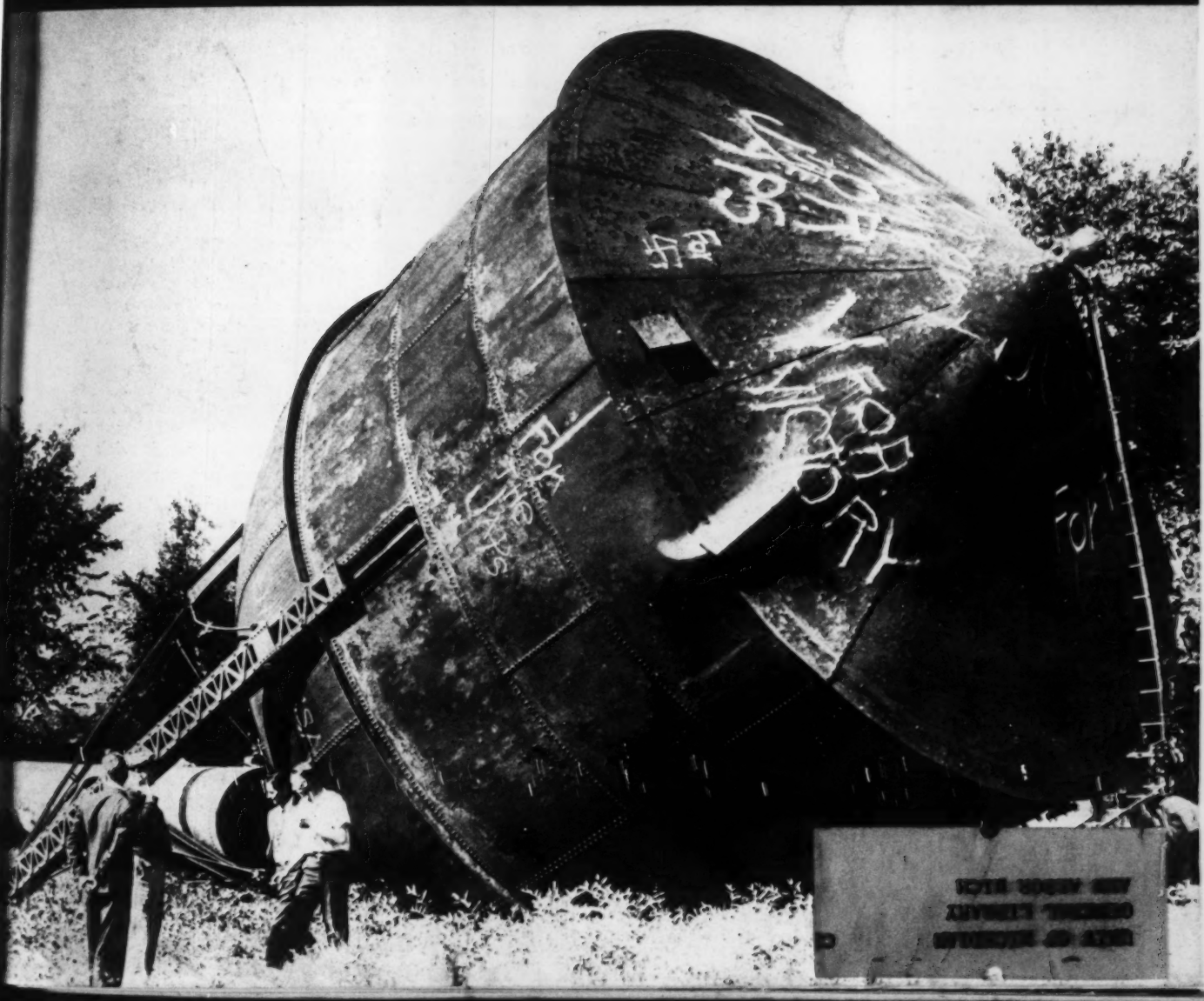
ENGINEERING NEWS-RECORD

An abandoned municipal water tank starts on its way to war in the nation's drive for scrap metal



ENGINEER McKENNA* IS IN A DILEMMA

He's spent three weeks designing a substation, and now he's afraid he didn't make sufficient allowance for future expansion

*Any similarity to anybody is entirely accidental

ACTUALLY that furrowed brow and those hours of mental gymnastics are quite pointless because the solution's so simple. Mr. McKenna, we suggest you follow these simple steps:

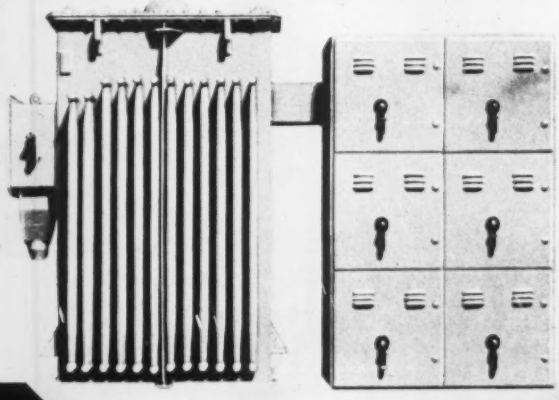
1. Place all your drawings in a neat pile, fold once across the middle, and send to your local scrap-salvage organization.

2. Take an hour or two to specify *standard* G-E unit substations—which can be installed WHEN and WHERE needed. Presto! Your problem's licked!

Sounds almost too easy, doesn't it; but see how logical this "packaged unit" idea is. For example, back in September, Engineer McKenna bought a new car—the last one he'll be able to get for the well-known duration. Even so, he was perfectly content to walk into the showroom, select a model, and drive it away. If he'd tried to "design" it himself, he wouldn't have received delivery yet.

The same story of much quicker deliveries, lower cost and a better, properly co-ordinated, "packaged" unit holds true for factory-assembled, standard unit substations. By specifying these standard units you save weeks of time formerly spent over the drawing board and in long, drawn-out correspondence. You avail yourself of the time-saving economies of efficient mass production. Over-all, you save *one to six months* over the old-style method. Your local G-E representative will be glad to work with you.

Safety-metal-enclosed G-E unit substations consist of metal-clad primary gear, a noninflammable Pyranol transformer, and a low-voltage-feeder section with drawout air circuit breakers. Designed for serving loads 600 volts and below from incoming, high-voltage lines up to 13.2 kv, they can be quickly and easily installed near electrical load centers without expensive vault construction.



LOAD-CENTER POWER DISTRIBUTION

In the load-center system — the *modern* method of distributing electric power—unit substations are the basic element. Power is distributed at relatively high voltage (2.4 to 13.2 kv) to these unit substations located near load centers. There it is stepped down to utilization voltage (below 600 volts) and distributed to the load via short secondary feeders—eliminating long, heavy, low-voltage feeders from a distant substation. You save tons of copper and steel, and the performance of motors, lamps, etc. is improved because of the reduction in voltage drop. *General Electric, Schenectady, N. Y.*

General Electric and its employees are proud of the Navy award of Excellence made to its Erie Works for the manufacture of naval ordnance

GENERAL ELECTRIC

The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • OCTOBER 15, 1942 • VOLUME 129 • NUMBER 16

Equipment survey to provide basis for production quotas

WPB expects to establish foundation for decisions as to how much manufacture will be needed to meet all requirements; determine what used machinery is available.

The War Production Board's survey of used construction equipment, now just getting fully underway, is expected to provide the statistical foundation for decisions as to how much production of new equipment will be needed to meet Army, Navy, and Lend-Lease demands, and to what extent the demand for some types can be met out of existing stocks of used machinery.

On the basis of partial returns to date, for instance, it's already apparent that there are power rollers in existence to meet nearly all demands.

The survey's start was delayed by mechanical difficulties in obtaining and distributing the necessary forms. These forms have now been in circulation for a week, however, and it's hoped to have the survey complete by mid-November.

Returns so far amount to about 20 percent of the total.

Owners are required to fill out and return a card for each piece of equipment, giving the type, size, manufacturer, serial number, age, condition, cost of needed repairs, and the work on which the machine is now being used. If the owner is willing to sell or rent, he is asked to insert his price on the form. These forms are kept by the construction machinery specialist in each of WPB's regional offices.

When an equipment user comes in asking for a priority on new equipment, he's told that it's useless to ask for one unless he's working on a job of extreme urgency—the sort that would rate an AAA priority. Otherwise, he's put in touch with owners of used equipment as revealed by the file.

Already, in fact, the Army and Navy themselves are beginning to meet their own equipment needs by buying used equipment through the facilities of WPB's used equipment section.

The amount of equipment in good shape that is listed as available for sale or rent is not large.

The next step, which is now being taken in many cases, is to put informal pressure on equipment owners who, it is thought, can get along on less equipment. A county, for instance, that owns three graders, will be asked to rent one of them for an airport job.

Outright requisitioning of equipment being used on non-essential work has not yet been resorted to, but there is little doubt that it will sometimes occur in future. The earliest cases are likely to be "friendly" requisitionings aimed to get around legal restrictions on sale of machinery owned by local governments.

Cite engineer officers for distinguished service

Two colonels in the Corps of Engineers and a colonel in the Army of the United States have been cited for distinguished and exceptionally meritorious services for award of the Distinguished Service Medal. All three officers were formerly engaged as constructing quartermasters.

Cited were:

Col. Edwin V. Dunstan, Corps of Engineers, who was zone constructing quartermaster in the Eighth Construction Zone during the period January 15, 1941 to December 16, 1941; Col. Edward M. George, Corps of Engineers, who was zone constructing quartermaster in the Ninth Construction Zone during the period January 20, 1941 to December 16, 1941; and Col. Frederick S. Strong, Jr., Army of the United States, who was zone constructing quartermaster in the Fourth Construction Zone from July 16, to Dec. 16, 1941.

1943 building returns to prewar level

In addition to the expenditures for direct war construction, essential non-war work is expected to amount to $585,000,000 for the coming year according to *Engineering News-Record* estimates.

This brings the total estimated volume of all construction to $8,260,000,000 for 1943, compared with $12,821,000,000 estimated for 1942, and the $11,396,000,000 estimated total for 1941. The estimated $8,260,000,000 total for 1943 compares with the pre-war volume in 1940 of $8,510,000,000 and is from 2.5 to 234 percent higher than the annual estimated construction volumes in the years from 1930 through 1939.

Exclusive of off-the-continent construction carried on by the Army and Navy combat units in the various theaters of operations and lease-lend construction, war building for 1943 is estimated at $7,675,000,000 by the War Production Board. This total for continental United States is approximately one-third below the all-time peak volume of more than $11,000,000,000 reported for war facilities in 1942. (*ENR*, Oct. 8, p. 463.)

Returning to the WPB war construction predictions for 1943, $4,125,000,000 or over half the total, will be spent for direct military facilities. Military housing accounts for $1,725,000,000; aeronautical construction for $1,600,000,000; and other military structures for $800,000,000.

Industrial war plant construction is estimated at $1,350,000,000, with government-financed plants responsible for $1,250,000,000, and privately-owned factories making up the $100,000,000 balance.

War workers' housing and commercial building construction is expected to approximate $1,200,000,000, evenly divided insofar as federal and private ownership is concerned. An additional $1,000,000,000 expenditure is estimated for all other necessary war construction not included in the above classifications.

A construction timing estimate accompanies the WPB forecast for 1943, with the prediction that $2,580,000,000 will be expended in the first quarter of the year: $2,205,000,000 in the second quarter; $1,575,000,000 in the third quarter; and $1,315,000,000 in the fourth quarter. These estimates are, of course, subject to revision as the war unfolds and resulting military strategy dictates how the work behind the lines must be modified to meet the new conditions.

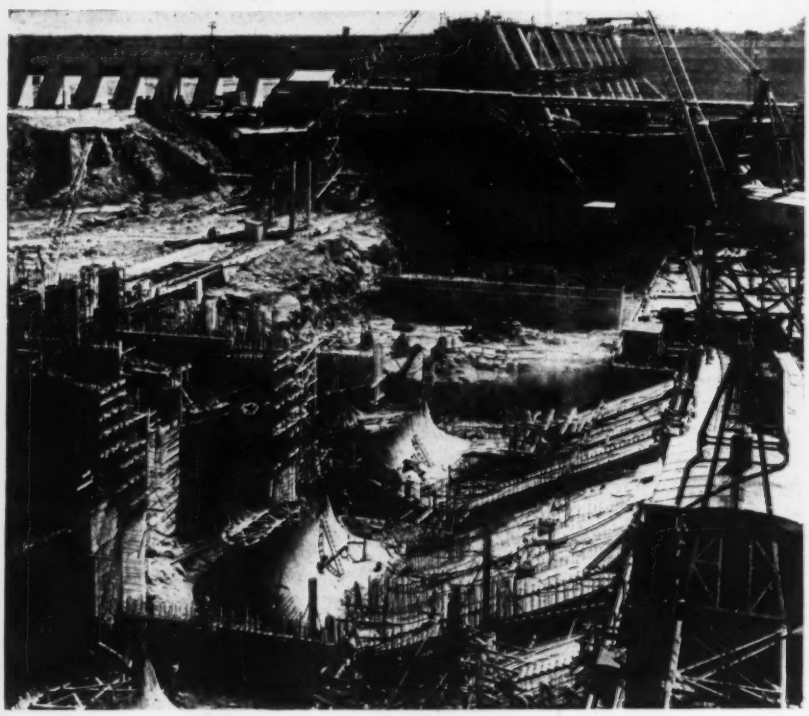
WASHINGTON HIGHLIGHTS

IN APPROPRIATING the funds for war housing authorized by Congress last month (*ENR*—Oct. 1, p. 449), the House last week reduced the amount to $500,000,000 from the authorized $600,000,000. The bill is now before the Senate.

TOTAL WAR construction completed, underway, or programmed, according to WPB figures, since June, 1940, now totals $26,000,000,000. By the end of this year about $19,000,000,000 will have been completed, leaving $7,000,000,000 worth of unfinished construction to be completed in 1943. Additional work started in that year is expected to bring the completed total at the end of 1943 to $29,000,000,000. Construction employment is now at a peak of 2,300,000 men. Steel consumption in construction this year will total 11,000,000 tons; next year it will be about 7,000,000. Copper requirements will drop from 175,000 tons this year to about 125,000 next year.

A THREE-MAN board, known as the War Department Board of Contract Appeals, has been established in the Office of the Under Secretary of War to speed adjudication of contractual appeals from decisions of contracting officers, chiefs of the supply services, and the Commanding General, materiel command, Army Air Forces. The board will render final decisions on appeals requiring the action of the Secretary of War under contracts that authorize the designation of such a board as his representative. Since many existing contracts do not authorize the appointment of such a board with such powers, the president of the new board will decide such appeals as authorized representative of the secretary. President of the new board is Col. Hugh C. Smith of the judge advocate general's department, and a member of a similar board during the first World War.

FPHA is considering an application filed by E. F. Kaiser for 7,000 additional dormitory housing units for use as reception centers and temporary quarters for workers brought into Kaiser-operated shipyards around Portland, Ore. If granted, the total of temporary and permanent housing units in the Portland area will be boosted to 34,318.



Fort Loudoun Dam construction rushed

Moving ahead with all possible speed, construction forces of the Tennessee Valley Authority are working "around the clock" to complete Fort Loudoun Dam.

The draft tube forms shown in the center foreground were completely erected in the job carpenter shop, then cut into sections and reassembled in place. Outside layer of sheathing was nailed on after the forms were set up in place.

Gasoline pipeline to link refineries

Construction of a new eight-inch gasoline pipeline, 82 miles long, to link a number of midwestern refineries with the eastern seaboard, is to be started within the next few weeks, according to Sidney A. Svensrud, vice-president of the Standard Oil Company of Ohio and president of the Ohio Emergency Pipelines, Inc.

The line will extend from Tiffin to Doylestown, Ohio, using second hand pipe from west Texas. It will receive gasoline from Toledo, Lima, Chicago, Wood River and other refineries through existing gasoline lines coming into western Ohio and will move gasoline eastward for delivery to the Sun Oil Line Company's existing line at a point east of Akron.

B. K. Morse of Philadelphia, chief engineer of the Sun Oil Company who is on leave to act as chief engineer for the emergency line, has established project offices at Mansfield, Ohio.

The new line will handle 50,000 barrels a day direct from the refineries, so that the existing Sun Oil Line will not be dependent upon seasonal deliveries via lake tankers, which have supplied the line since it was pressed into service several months ago.

The Ohio Emergency Pipeline, Inc., will build the line for the Defense Plant Corporation.

• • •

WPB appoints group to outline technical bureau

Appointment of a committee of engineers and scientists to determine the manner in which a projected Office of Technical Development should be set up within the War Production Board (*ENR*, August 20, p. 259, and previous), and to define the scope, functions and methods of operation of such an office, has been announced.

Decision to establish the office was made some time ago, following a report by a previous committee recommending that the WPB set up a strong scientific and technical organization to insure greatest use of the nation's limited manpower in these fields.

Chairman of the new committee is Webster N. Jones, director of the College of Engineering at Carnegie Institute of Technology, Pittsburgh, Pa. Other members include: Lawrence W. Bass, director of research, New England Industrial Resource Foundation, Boston; Oliver E. Budley, president of the Bell Telephone Laboratories, in New York City; Col. Clarence E. Davies of the U. S. Army Ordnance Department; and Admiral J. A. Furer, representing the U. S. Navy.

ENGINEERING NEWS-RECORD. Published every Thursday. Vol. 129, No. 16. Price 25c per copy. Allow at least ten days for change of address. All communications about subscriptions should be addressed to the Director of Circulation, 330 W. 42nd Street, New York, N. Y. Subscriptions, United States, U. S. Possessions and Latin American Republics $5.00 for one year, $8.00 for two years, $10.00 for three years. Canada $5.50 for one year, $9.00 for two years, $11.00 for three years. Great Britain and British possessions 54 shillings for one year, 108 shillings for three years. All other countries $9.00 for one year, $18.00 for three years. Entered as second-class matter October 29, 1936, at the Post Office at Albany, N. Y., under the Act of March 3, 1879. Printed in U. S. A. Cable Address "McGrawhill New York." Member A.B.P. Member A.B.C. Copyright 1942 by McGraw-Hill Publishing Company, Inc. James H. McGraw, Founder and Honorary Chairman; James H. McGraw, Jr., President; Howard Ehrlich, Executive Vice President; Mason Britton, Vice-President; B. R. Putnam, Treasurer; Joseph A. Gerardi, Secretary; J. E. Blackburn, Jr., Circulation Manager. Publication office: 99-129 North Broadway, Albany, N. Y. **Editorial and Executive Offices:** 330 West 42nd St., New York. Branch offices: 520 N. Michigan Ave., Chicago; 68 Post St., San Francisco; Aldwych House, Aldwych, London, W.C. 2, England; Washington; Philadelphia; Cleveland; Detroit; St. Louis; Los Angeles; Boston; Atlanta, Ga.

Steel fabricators check their course

The annual meeting of the American Institute of Steel Construction, held at Colorado Springs the first part of this month, was a stock-taking session on the part of an industry that has done its war job so quickly and completely that the problems of its immediate future had necessarily to be neglected.

That the problems are real and urgent was emphasized by Clyde G. Conley in his presidential address, when he pointed out that "restrictions on the use of steel for other than war purposes threaten to close down about one-half of the fabricating capacity of the United States during the coming year." This marginal half of capacity must apparently be utilized for other than normal products—ship parts, ordnance items and the like—while the remainder can expect to supply structural steel for construction, which Stacy May, WPB statistician, estimates will stay at this year's level of about 1,250,000 tons.

Outlined are some of the highlights of the meeting:

The structural steel fabricating industry shipped over 2,700,000 tons of fabricated steel in 1941, and erected it in bridges, buildings, factories and military bases. Its ability to produce, according to special plan and specification, anything made of iron or steel structural shapes and plates has proved of unique value to the war effort.—*Clyde G. Conley, president, A.I.S.C.*

Experience will tell

Experience will tell whether combining the two Institute specifications, one for riveted and bolted construction, the other for welded construction, as was done by WPB in formulating its national emergency specification for the design, fabrication and erection of structural steel for buildings, will be the proper future move for the Institute itself to take. A tendency on the one hand to reduce live load, and on the other to increase unit stresses, should be watched; if both occur, the quality of the building is going to suffer.—*Jonathan Jones, chairman, A.I.S.C. Committee on Specifications.*

Today's enthusiasm for "synthetic" construction materials may be excellent to stimulate experiments, and may develop some improvements, but steel construction has long proved itself, and no substitute will be found for it in post-war construction. We have noted many extravagant claims for these other types of construction that will be easily refutable once this war is over.—*V. G. Iden, secretary, A.I.S.C.*

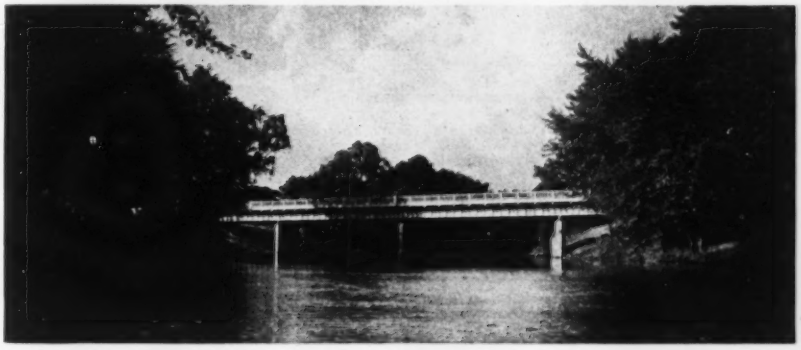
Approximately 82 percent of our work this year is the result of direct government work, over 79 percent being for war plant expansion. The number of jobs averaging over 1,000 tons each has increased from 55.1 percent of the total in 1941 to 65.4 percent so far this year. —*T. H. Hendrix, director of statistics, A.I.S.C.*

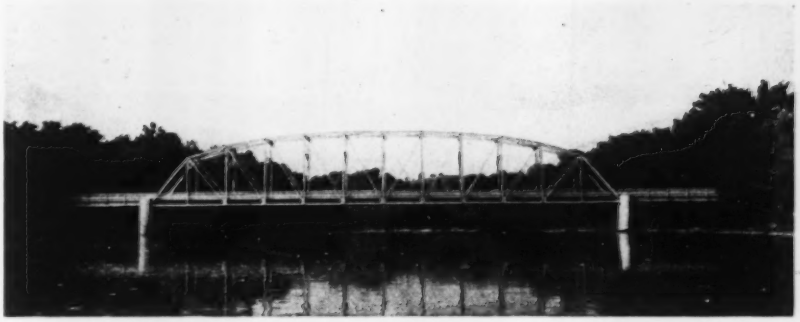
Structural research

Two important items of structural research have been completed by A.I.S.C. research fellows, and two others are still under way. The report on steel column research at Lehigh University will be published immediately, covering the cause and effect of flange buckling; the results from compression in short columns while local moments are applied to the columns by beam connections; and a study of the present A.I.S.C. column formula as affected by eccentric loading. The results of the study of continuity in riveted building connections will be used to prepare a specification on semi-rigid connections to serve as a tentative supplement to the Institute's standard specifications.

The present program on the stability of stiffened plates at Lehigh University will cover experimental corroboration of the stability problems involved, as affected by plate thicknesses and the relative size and spacing of stiffeners. The investigation of full-scale steel specimens, utilizing perforated cover plates for compression members, is continuing at the National Bureau of Standards.—*F. H. Frankland, director of engineering, A.I.S.C.*

Structural steel fabricators have less to fear from competing materials than other divisions of the steel industry. The new lean-alloy, high-tensile steels will permit much more economical use of building steel in the future.—*W. W. Smith, Inland Steel Co.*





Ohio opens highway bridges for war traffic

The photographs above show how the Ohio State Highway Department is attempting to care for demands of heavy wartime traffic on its roads.

At top is a new bridge forming a link in State Route 422. Built by the Horvitz Company, of Cleveland, at a cost of $290,000, the new structure is 365 ft. long with four spans, has an H-20-33 loading capacity, and carries a 51.8 ft. roadway.

The lower photograph is that of an old bridge in a new location. First erected in 1914 over Big Darby Creek on U. S. Route 40, the all-steel bridge has been dismantled and re-erected as a link in State Route 75 over the Tuscarawas River, east of Coshocton.

Originally 247 ft. long, due to the addition of I-beam approach spans, the bridge is now 379 ft. long, with a concrete floor and a 20 ft. roadway.

C. R. Boulton, general contractor of Columbus, had the contract for dismantling the bridge, removal and reconstruction, at a cost of $42,234.

San Francisco's Union Square as it looks today with parking space provided for 1,700 cars below street level.

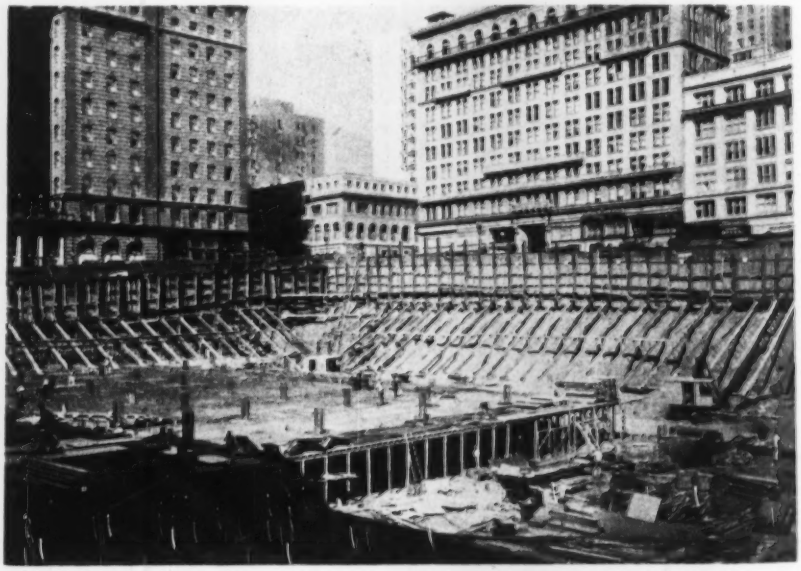
Parking Space Four Stories Down

Late last month, construction was completed on a four-story parking garage under San Francisco's Union Square. The project was undertaken as a means of relieving heavy traffic congestion in this busy downtown shopping center. Work on the structure was begun in March, 1941.

Union Square, occupying an area of 275x412 ft., which was owned by the city, offered unused space well adapted for this purpose. By making an excavation 48 ft. deep for the structure, it was found possible to provide parking space for a maximum of 1,700 cars. Excavation was relatively simple because power shovels could load into dump trucks, which moved out on ramps. Unusual problems had to be worked out in bulkheading the sides of the excavation, chiefly in sand, which had a heavy surcharge on all four sides. How this problem was overcome was described in *Engineering News-Record*, Nov. 20, 1941, p. 714.

The garage structure was designed to withstand thrust on all four sides, using the floors as horizontal diaphragms to transmit from one side wall to the other. The floors are flat slab construction in bays 24 ft. 3 in. by 27 ft. 5 in. (which allows for three lines of parked cars) between rows of columns. At the bottom of the walls, horizontal struts 18 in. square and on the same spacing as the columns, extend from the wall to the first row of column footings, thus providing additional resistance to side thrust.

The main floor level, for each story, obtains only in the center of the building; on either side are mezzanine or half-floor levels. This arrangement gives maximum space economy with the available headroom, which is approximately



Union Square as it looked in March 1941 during early stage of construction.

A typical floor with 24 ft. 3 in. by 27 ft. 5 in. bays, which allows for three lines of cars, between rows of columns.

9½ ft. from floor-level to floor-level.

To enable the floors, which are flat slabs 10 in. thick, to function as horizontal diaphragms in transmitting thrust from one side of the excavation to the other, it was necessary to provide for this load to pass from mezzanine to main floor level and back again on the opposite side. Ramps into the mezzanine floor are designed to carry these loads down to the floor below. At the center of the building, where there are no ramps, this transfer of load is accomplished by vertical panels, 14 in. thick, which serve as vertical shear walls to transmit stress from one level to another. These vertical panels are used between all offset floors where thrust is to be transmitted. In the floor slabs themselves, wherever a thrust is parallel to the construction joints, offsets are provided to transmit any shear.

Minimum height clearance in ramps is about 8 ft. and maximum grade 15 percent. All floor slab openings were framed without the use of beams. Continuous drop panels were used where loads are heaviest.

Walls were designed as 14-in. slabs between roof and top floor and as 16-in. slabs below the top floor. Pour-joints in all exterior walls were specially keyed to transmit earth pressures to the floor system. Stairways, at four locations, are enclosed in concrete fire walls with double-door or "air lock" access from the four floors. Stairs and vestibules are sidewalk vented to avoid smoke danger.

The roof surface is warped roughly to suit the contour of the original park at

This endless chain elevator between floors is for use of employees only. All cars are parked by attendants.

street level. The roof slab is 12 in. thick and is overlaid by a minimum 2 ft. of topsoil for the landscaping. Tree boxes are designed to afford a 5-ft. soil depth.

The Dewey monument, a tall granite shaft that stood in the center of the square, has been replaced atop the garage structure, somewhat reduced in weight and strengthened against seismic disturbance (which might easily have toppled it over before). As set up on its new supports, the central column of the monument has been hollowed out and filled with a reinforced-concrete core bonding its several parts into a monolithic structure well anchored to its support. The roof panel on which this monument stands (a 33-ft. 9-in. by 37-ft. slab) has been thickened from the usual 12 in. to a 19 in. depth to resist horizontal loads of seismic origin. The supporting column beneath, running through to the foundation, is 3 ft. in diameter all the way down. Typical building columns are 22 in. in diameter in the top story and 30 in. in the lower story.

In the event of an air raid on downtown San Francisco the garage as now constructed, including replacement of the park, will afford ample protection against incendiary bombs and building fragments.

Timothy L. Pflueger was the architect on the project. Walter L. Humber and Edward M. Knapik were the structural engineers. The contract for construction was held by Macdonald & Kahn, Inc.

Florida plans rebuilding Overseas Highway

The Florida State Road Department recently announced plans for starting work at once on $4,300,000 worth of road projects, including improvements to the Overseas Highway from the mainland to Key West.

The department ratified an agreement with the Public Roads Administration for improvements including rebuilding and repaving of 83 miles of roadway and construction of three bridges. The bureau recently rejected as too high a low bid for the $3,000,000 worth of work on the highway (*ENR*, Aug. 6, p. 189).

The agreement between the road department and the PRA specifies that the highway shall be built in the shortest possible time on a force account basis, 75 percent of the cost to be borne by the federal government and 25 percent by the department. The department will also furnish all labor, materials, tools, machinery, power, fuel, labor camps and equipment.

Cleary Brothers Construction Co., of West Palm Beach, has already started work on the contract for building or rebuilding 19 bridges on the highway between Stock Island and Big Pine Key.

Georgia starts bridge work

The Georgia state highway department recently began work on a $429,787 construction project including the construction of a concrete bridge over the Ogeechee River on the Statesboro-Savannah highway.

H. G. Smith Construction Co. of Fitzgerald was low bidder on the contract. In addition to the bridge, the contract calls for erection of an overflow over the highway, a bridge culvert, and a little less than a mile of paving.

• • •

Jersey plans parkway to connect bridges

Plans for construction of a three-to-five-lane highway and parkway along the top of the Palisades to connect the George Washington Bridge with the Bear Mountain Bridge on the west bank of the Hudson River have been submitted to the New Jersey State Highway department to be incorporated in the department's postwar program.

As now planned, the parkway would run along the top of the Palisades until it reached the New York state line, and then would turn northwest, toward the Letchworth, N. Y., state hospital and the Harriman section of Bear Mountain Park.

Paralleling the existing U. S. Route 9-W, two more lanes would be constructed, one for northbound and the other for southbound passenger traffic. The present highway, which would be a kind of center strip to this new parkway, would be used by trucks. Total length of the new parkway would be about 45 miles, of which 10 to 12 would be in New Jersey.

Areas between the highway lanes would be as wide as 220 ft. and narrow to 12 ft. Total cost of the project has not been closely estimated, but it is believed it would cost about $7,200,000 to build the section through about 17 miles of Bear Mountain Park.

• • •

Approve draining Canadian lake for iron ore

Development of the Steep Rock Iron Mine, which would necessitate the draining of Steep Rock Lake in Ontario (*ENR* May 14, p. 814), has been declared essential for Canada's war effort.

C. D. Howe, Minister of Munitions and Supply, said that the government of Ontario will provide about $2,000,000 for construction of a new ore dock at Port Arthur, and construction of a six-mile railroad spur from an adjacent line of the Canadian National Railways. Both the dock and the railway spur will be operated as publicly owned properties.

Further assistance will be given as a subsidy on the rail freight rate for the first five million tons of ore shipped to Port Arthur. Preliminary exploration work on the lake, midway between Port Arthur and Fort Frances, showed a deposit of about 15,000,000 tons of high grade iron ore, said to be one of the most important deposits in North America. The deposit cannot be worked, however, unless the lake is drained. Drainage operations will make necessary construction of a million dollar power line to supply power to the Ontario-Minnesota Pulp and Paper Company, which now operates a dam and power house on the lake.

• • •

Road bureau hires first woman draftsman

Because 30 of the 36 men in the drafting room of the North Carolina State Highway and Public Works Commission have been lost through calls by the armed services, or have accepted jobs elsewhere in connection with the war effort, the department has begun hiring women draftsmen.

The first woman to be employed, Miss Rebecca Barnhill of Raleigh, went to work on Oct. 1, after taking a three months training course at the Duke University School of Engineering at Durham. Miss Barnhill has been assigned to the roadway planning department.

Highway department asks cut in budget

The North Carolina Highway and Public Works Commission recently requested the State budget commission to recommend passage of a highway appropriation for the next two years that would be $26,000,000 below funds provided for the biennium now ending.

Ben Prince, chairman of the commission, asked the budget body to recommend an appropriation of $23,798,522 for 1943-44, and $23,596,958 for 1944-45. These figures compare with $38,349,353 for 1941-42 and $34,440,075 for 1942-43.

In September alone, commission tax receipts were more than a million dollars below the same period in 1941, Prince said, and added that by 1944-45, revenues will be only around $30,000,000, as compared with $45,000,000 last year.

Prince predicted that the budget request for the next biennium probably would leave the department spending more than it receives during the period, but said that a departmental surplus, now $18,790,586, would take care of the deficit for the time being.

• • •

Road travel, gas taxes drop in August

Traffic on rural highways declined 19 percent in the gasoline-rationed area and 27 percent in the unrationed area in August compared with the same month a year ago, the Public Roads Administration has reported after a preliminary survey of the records of more than 460 automatic traffic recorders operated by 39 state highway departments.

Gasoline tax collections in 31 states, representing fuel consumption mainly in July, totalled $47,574,000 or 20 percent less than a year earlier. In 10 rationed and 21 unrationed states, collections were down 25 and 17 percent respectively.

As an indication of the near elimination of "pleasure" driving, the report cited supplementary records showing the following decreases in August passenger-car traffic: 17 toll facilities scattered from Maine to Virginia, 42 percent; Sumner Tunnel, Boston, 30 percent; Cross County Parkway, New York, 64 percent; Pennsylvania Turnpike, 67 percent; Pensacola Bay Bridge, Florida, 34 percent; and 16 toll bridges in Kentucky, 29 percent.

ALABAMA State Highway Director W. G. Pruett has announced the completion of paving of the last two unpaved gaps in U. S. Highway 80, extending from Tybee Island, Ga., to San Diego, Cal. The gaps occurred in the 228-mi. stretch of the highway in Alabama.

Completion of reclamation work urged as war need

Foreseeing shortages in food and fibre crops required to prosecute the war, the Department of the Interior will urge upon Congress and the Bureau of the Budget the necessity for appropriation of funds to accelerate completion of pending reclamation projects, Abe Fortas, Under Secretary of the Interior, told members of the National Reclamation Association this week.

Mr. Fortas was one of a number of speakers at the association's annual convention, held at Denver, Colo.

"There are signs," Mr. Fortas said, "that there will soon be shortages in food and fibre crops needed for the war. Here, as in the industrial field, we shall not be able to escape the consequences of our failure to take action now on some plainly indicated problems.

"These problems include the immediate ones of labor supply, fertilizer and farm equipment, and those of providing additional acreage of farm lands.

"In normal times, our domestic acreage devoted to the above mentioned crops is supplemented by imports which are now largely cut off. Our 1942 program called for the increased planting of certain deficit crops in the amount of 16,000,000 acres. In addition, about a million and a half additional acres are needed for sugar and rubber. Of this total acreage, 7,500,000 can be obtained by decreasing wheat acreage, but 10,000,000 acres of additional farm land must be provided.

"A substantial part of this acreage must be provided in the arid western states. And we must provide, of course, not merely the land but the water. This means we must push to completion reclamation projects now under way, and, so far as possible, start new ones that can be rapidly completed.

"The situation with respect to power developments that are an inseparable part of the reclamation projects, is much the same. We are still faced with the prospect of power shortages in 1943 and thereafter, if our war production program proceeds as it must. There, again, we need money, materials and manpower to complete projects now under way, and to undertake new ones to provide for later needs."

• • •

Plan modernization of Mexican seaport

Plans for the modernization of the town of Vera Cruz, Mexico's leading port on the Gulf of Mexico, have been approved by President Manuel Avila Camacho after the chief executive made a personal inspection of the port.

Total expenditure, over a three year period, will be about $3,310,000.

British suit road maintenance to war

Though few English roads do not show signs of increased wear resulting from heavy war traffic, excellent surfaces have been maintained in most districts, thanks to high-class materials, careful layout, and attention to drainage when the old roads were built. Thorough compacting and removal of all loose material and foreign matter have made roads so durable that wartime repairs can be limited mostly to patching and surfacing. Constant supervision, prompt attendance to defects, and maintenance repairs before winter sets in have helped to keep damage within limits.

Limitation of repair work to surface treatment is officially suggested whereever possible because of its low cost in material and labor. The rate of spread of tar or emulsified asphalt is considered the most important factor affecting quality. Much use therefore is made of mechanical spraying from tanks to give uniform distribution.

The existing surface brought as nearly as possible to a uniform contour by cutting out and repairing faulty places, is brushed thoroughly, preferably with a power-brush. All surface dressing with hot tar is carried out between May and September, but successful results have been obtained in other months with a tar of low viscosity. With ½-in. chippings, 100 sq.-yd. can be surfaced with 20 gal. (Imp.) of tar and one long ton of chippings. Very good results also are obtained with emulsified asphalt covered with gravel or broken slag and rolled.

Carpets between ¾ and 1¼ in. thick are made with asphaltic bitumen or tar binders. Bitumen binders are laid successfully on existing bituminous or concrete surfaces. For very heavily traveled roads, 180/220-penetration asphaltic bitumen of specific gravity 1.00-1.05 at 15.5 deg. C. open flash-point of 200 deg. C. and softening point between 35 and 41 deg. C., is giving best service. The binder contents of the carpet are normally 4 to 4½ percent, possibly 5 percent, by weight of the mixed materials, and if laid on concrete or smooth bituminous surface a tack coat of bitumen emulsion is applied at a rate of spread of 10 to 12 sq.yd. per gal.

For tar carpets, preferably with crushed rock rather than gravel aggregates, a road tar of specific gravity 1.12-1.25 at 15 deg. C., with a phenols maximum of 2.5 percent by volume and naphthalene and water maximum of 3.5 and 0.5 percent by weight is generally used. Per long ton of aggregate, 11 to 12 Imp. gallons of tar are used, and adhesion to old concrete surfaces is secured by a tack coat of tar emulsion.

• • •

A.G.C. schedules board meeting for Oct. 19-20

The fall meeting of the governing and advisory boards of the Associated General Contractors of America will be held Oct. 19 and 20 at the Drake Hotel in Chicago, Ill. A.G.C. secretaries council will meet on Oct. 18.

Dan W. Kimball, president of the group, said the meeting will advance suggestions as to how general contractors can continue to execute war projects at top speed.

Shortages may stop water district tree planting

Part of a group of 50,000 Monterey pines that the East Bay Municipal Utility District at Oakland, Cal., planned to set out within the next year to protect its watershed lands is shown above.

The trees were part of an ambitious 100,000-trees-per-year program set up by the district a year ago. Whether the planting can be carried forward, however, is a matter of conjecture, since shortages of low-cost labor, and of tin containers in which the trees are nutured have developed.

MEN AND JOBS

Robert S. Wait, of Syracuse, N. Y., vice-president of the Wait Associates, Inc., consultants, and **Henry A. Strecker, Jr.,** assistant engineer for the New York State Department of Highways at Babylon, L. I., have been appointed field consultants for the New York State Post-War Public Works Planning Commission.

Edward L. Green, U. S. Bureau of Reclamation engineer, who has been employed for the past nine years as an engineer at Grand Coulee Dam, has resigned to join the engineering staff of Henry J. Kaiser Co.

Howard W. Myers, an engineer in the Department of Public Works of the City of Chicago, Ill., for the past 36 years, has retired from his post.

B. J. Vierling, a graduate of Stanford University, has been appointed superintendent in charge of engineering and maintenance activities for Pennsylvania Central Airlines Corp., with headquarters at Washington, D. C.

S. R. Simmons, construction superintendent for the Plantation Pipe Line Co., recently opened offices at Greensboro, N. C., to supervise the work from there. Others assigned to this office include **H. J. Henlon** and **V. H. Kyle,** engineers.

Charles D. Thomas, who served as a civil engineer on construction of many of New York's subways and railway tunnels, has retired from his post of civil engineer with the board of transportation of the City of New York. A graduate of Maine State College in 1895, Mr. Thomas did engineering work for the City of Taunton, Mass., Boston, Mass., the U. S. Navy Yard at Boston, and the Navy Yard at Brooklyn, N. Y., before entering the subway and railway field.

Roy M. Young, resident engineer at Ames for the Iowa Highway Commission, has been granted leave to take an engineering post with the Civil Aeronautics Administration at Kansas City, Mo.

Lt. Thomas L. Kennedy, CEC-USNR, is now on duty at the U. S. Naval Air Station, Terminal Island, Calif., as project manager and resident officer in charge of projects there.

Jack Pullan, formerly county engineer of Mills County, Ia., has become an engineer on bridge construction at Fairbanks, Alaska, on the Alaska highway project.

Hugh R. McCall, since 1935 senior construction engineer with the Soil Conservation Service, U. S. Department of Agriculture, has been commissioned in the U. S. Public Health Service, and assigned to the Medical Division, Office of Civilian Defense.

William J. Sullivan, chief engineer of the Boston, Mass., street design department, retired recently after a career of more than 51 years in the service of the city.

Floyd K. Brown, Sigourney, Ia., county engineer for Keokuk County, has taken a three months' leave of absence to become a member of the highway survey for the Public Roads Administration on the Alaska Highway. **Chauncey W. Kerr** will assume Mr. Brown's duties in his absence.

John S. Marshall, formerly chief draftsman for the Colorado State Highway Department at Denver, has been commissioned a captain in the Corps of Engineers and is now stationed at the Colorado Springs air base as assistant to the area engineer.

P. A. Michel, county engineer of Montgomery County, Ia., has been ordered to service as a captain at the 7th Corps Area Army Headquarters in Omaha, Nebr.

James Logan, formerly state highway engineer for the New Jersey State Highway Department, has announced his resignation to enter defense construction work with a private contractor.

Clayton Howell Merrell, an engineer with the American Telephone & Telegraph Co. at Charlotte, N. C., has been commissioned an ensign in the U. S. Navy.

Ford D. Loveland, area engineer at Buckley Field, Colo., has been commissioned a captain in the Corps of Engineers.

W. A. Schakel has been appointed assistant engineer of structures for the New York Central Railroad System, with headquarters at Cincinnati, Ohio.

Frederick C. Taylor, planning engineer for the Michigan State Highway Department, has accepted an appointment as transportation consultant to the War Department. He will continue in an advisory capacity with the highway organization.

Maj. B. W. Rumbarger has been assigned as area engineer for the Colorado Springs, Colo., air base. **Maj. O. K. Graef,** formerly area engineer, has been assigned to new duties at Denver.

Sgt. John H. Works, formerly a civil engineer of Boaz, Ala., has been awarded an air medal, newest military honor in citations released by the Alaska Defense Command.

Aime Cousineau, sanitary engineer of the Montreal Health Department and superintendent of the hygiene division, has been appointed assistant director of the department, succeeding the late Dr. Eugene Gagnon. Mr. Cousineau will retain the position of sanitary engineer.

J. F. Arthurs, formerly county engineer of Marshall County, Ia., is now a lt. col. in the Coast Artillery, stationed near San Diego, Calif.

Maj. Frank M. Keller, area engineer in charge of construction at the Utah Quartermaster Depot, stationed at Ogden, has been promoted to the rank of lt. colonel.

Guy B. Panero will be project manager for the H. K. Ferguson Co. on the design and construction of synthetic rubber plants for Firestone Tire & Rubber Co. in Louisiana.

Col. Robert R. Neyland, former University of Tennessee football coach, who has been district engineer at Norfolk, Va., for more than a year, has been transferred to Dallas, Tex., as divisional engineer there.

Ray Warren, former city engineer for Greensboro, N. C., is now a major in the Corps of Engineers, assigned as area engineer at Camp Davis, N. C.

Lt. Col. George F. Griffith, commanding officer of the Badger Ordnance Works since construction started, has been transferred to the post of commanding officer at the Keystone Ordnance Works in Pennsylvania.

Ben Snow, who has been area engineer for the construction of an air field near Meridian, Miss., has been named area engineer for construction of a military installation in Panola County, Miss.

Robert Berns, assistant construction engineer for the Indiana State Highway Department, has been appointed engineer, succeeding **Henry E. Sprow,** who recently became a captain in the Corps of Engineers.

Capt. Charles A. Jackson, Jr., former head of the Seattle district construction section, U. S. Engineers, is now Upper Columbia area engineer at Wenatchee, Washington.

Ask easing of censorship on research results

Asserting that the greatest benefit to war production and to victory in the field will result from a liberal policy in making available the results of scientific research, the Welding Research Committee of the American Welding Society has called for easing of censorship on publication of such research reports.

Colonel G. F. Jenks, president of the American Welding Society and chairman of the committee's Industrial Research Committee, said his group is beginning to feel the results of restrictions in publication of information because of government censorship.

The committee, headed by C. A. Adams of Philadelphia, in its annual report reviewed the large number of studies on the various questions of welding which it completed or carried on during the year ending October 1. Results of these studies were discussed at the Fundamental Research Conference of the Society on October 12 at Cleveland, Ohio. Because of the vital importance of welding to the nation's war effort, and censorship rules, the Fundamental Research Conference will be a closed session.

The group pointed out that welding has made possible the nation's present production of ships, tanks, planes, guns and ammunition, together with many other accessories necessary for mechanized warfare.

The committee called for additional support from industry and said its literature division makes available the best existing knowledge of European methods of welding armor plate and other alloy steels to enable our experts to take into account all methods of saving strategic alloying elements without sacrificing weldability and the necessary physical properties.

• • •

Jury indicts distilleries on pollution charges

The Franklin County grand jury at Frankfort, Ky., recently indicted three distilleries on charges of maintaining public nuisances by permitting still slop and other refuse to flow into three streams, making the waterways "foul, nauseous and unfit for man, beast and marine life."

The indictments named the Green River Distilling Co. of Stamping Ground, the National Distillers Products Corp. of Woodford County, and the George T. Stagg Co. of Frankfort.

The grand jury's investigation was initiated by charges brought against the distilleries by property owners along the streams and by the Franklin County Sportsmen's Club, who charged that by permitting slop and refuse to flow into the stream, the distilleries had brought about the death of fish and other marine life.

George S. Davison dies; Pittsburgh engineer

George S. Davison, prominent Pittsburgh engineer, a past-president and honorary member of the American Society of Civil Engineers, died suddenly on Oct. 3 in the Cleveland clinic where he had gone for a physical check-up. He was 86 years old.

At the time of his death, Mr. Davison was chairman of the board of the Pittsburgh Coke & Iron Co., and continued to take an active interest in the affairs of that company and of several others of which he was a director.

A civil engineering graduate of Rensselaer Polytechnic Institute in the class of 1878, Mr. Davison spent four years on railroad work in the Midwest before going to Pittsburgh in 1882 as chief engineer of the Pittsburgh, Chartiers and Yougheogheny R. R. From that time on his interest centered in Pittsburgh and he took a leading part in civic developments involving engineering questions, notably rapid transit and flood control. From 1897 to 1904 much of his time was given to street railway construction and management.

In 1904 his interest turned to oil and he joined the Gulf Refining Co., ultimately becoming its president. In the latter part of 1906 he initiated construction by the company of its 500-mile pipe line from Tulsa, Okla., to the Gulf at Port Arthur, Texas.

Mr. Davison served Pittsburgh as secretary and member of the engineering committee of the Flood Commission of Pittsburgh, as a member of the Citizen Committee on City Plan, as a member of the Planning Commission and as chairman of the Transit Commission.

Los Angeles approves new building code

After years of agitation led by the Associated General Contractors and the Los Angeles Chamber of Commerce, a new building code for the City of Los Angeles, Calif., will become effective Jan. 1.

The new code, said to be unique in that it states the result to be achieved, rather than the method to be used, and establishes certain requirements and prohibitions between which the individual is given as much latitude as possible, was haled as a milestone in the history of the building industry of this California city.

Frank J. Connolly, manager of the Associated General Contractors, said that adoption of the code is the most important building legislation in the city in the last generation. "Its effect will be felt more widely when peace returns and the city goes back to normal building activities," Mr. Connolly said.

The new code emphasizes continuous inspection of any structures being built. Residential construction, is to be done under the inspection system in accordance with the residential code section, which contains a schedule of requirements and enables the builders to construct dwellings without calculating stresses. The earthquake requirements include an allowance for the effect of structural elasticity which, for buildings within the height allowed in Los Angeles, are in excess of state requirements. The structural provisions, to a large extent, follow the recommendations of the major material institutes and the quality of materials is based upon ASTM and ASA or other generally recognized authorities.

• • •

Engineer division gets office by condemnation

A federal court at Cincinnati, O., recently granted possession of seven floors of the thirteen-story Huntington National Bank Building in Columbus, for use by the Ohio River Division headquarters, U. S. Engineers. The division, with several hundred employees, is expected to move to Columbus soon (*ENR*, Aug. 13, page 205).

Immediate possession of the 63,000 sq. ft. of office space is given to the government by this order, granted under condemnation proceedings, but 57 tenants now occupying the space will be permitted until Nov. 1 to secure other quarters.

THE state of Kentucky is preparing to take over maintenance of about 50 percent of the 225 miles of arterial highways running through Kentucky cities.

MEN AT WORK

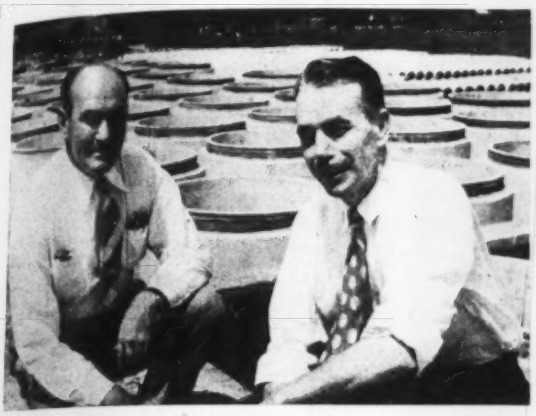
Above: E. ARTHUR BELL, borough engineer of Essex Falls, N. J., had taken time out from his official duties when this picture was snapped to aid in drawing up resolutions for adoption by delegates to a recent wartime meeting of the New Jersey Sewage Works Association.

Above: O. A. McFARLAND, superintendent for the Bass Engineering Co. of Detroit, tries a sample of water from the new filtration plant he has built for the Newport News (Va.) Water Commission.

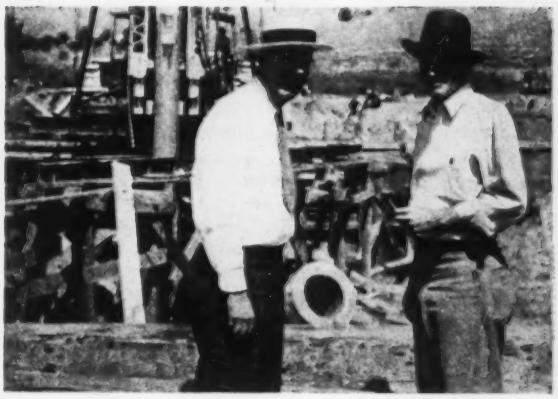
Below: MAX ALPERIN, formerly consultant and adviser to the Chief Engineer, Bureau of Engineering, Comptroller's office, New York City, is now First Lieutenant Max Alperin, attached to the Sanitary Corps, Army of the U. S., at Camp Pickett, Blackstone, Va.

Above: The Army's new auxiliary unit—the WAACS—must be housed at their new training headquarters at Fort Des Moines, Ia., and these men are doing the job. Left to right, they are: WILLIAM GOLDSMITH, General manager of the Woodcrest Construction Co. and Rosoff Brothers, Inc.; R. W. SCOTT, expediter; LT. COL. H. O. GRAHAM, executive assistant to the district engineer; MAJ. A. J. BAUSTIAN, Area Engineer, and MAJ. F. M. THUL, in charge of area control section.

Above: Hard at work on plans for construction of an extensive highway network in the vicinity of the War Department's huge new office building at Arlington, Va., are these four employees of the Corps of Engineers. Left to right, they are: L. J. NORTON, field supervising engineer; C. M. NOBLE, assistant to the consultant in charge of the transportation group; H. A. BLAUVELT, design engineer, and W. S. CHAPIN, transportation consultant when the above photo was taken and now a major in the Corps of Engineers.



Above: HOWARD C. JONES (left), job manager for the Lock Joint Pipe Co. at Ewell, Va., explains the fine points of pipe making to PAUL DONALD, Federal Works Agency representative from the Richmond regional office.



Above: R. J. PRINCE, (left) construction engineer for Columbia Steel Co., and LEE J. BULLEN, superintendent for Bates & Rogers Const. Corp., inspect pile driving for blast furnace construction at Provo, Utah.

Below: Much of the credit for the rapid progress of work on Route 60, near West Point, Ky., belongs to these men. Left to right: J. P. MARSHALL, resident engineer for the state highway department; V. ISAACSON, superintendent for L. G. Arnold, grading contractor; W. P. LANE, assistant to the district engineer, and H. E. RUDY, resident engineer for the highway department.

Below: Problems on construction of the Panther Creek Bridge south of Owensboro, Ky. are solved by, left to right: LA MAR RINEY, assistant district engineer; NOEL PATTON, highway engineer; GEORGE H. HAILEY, district engineer; all of the Kentucky State highway department.

Below: L. J. PARRISH, assistant district engineer of construction at Elizabethtown, Ky., for the Kentucky State Highway Department, checks over plans and specifications for construction work under way on Kentucky Route 31 W.

This Week on the Scrap Front

The nation needs scrap metal—17,000,000 net tons of it—by Dec. 31 of this year to enable the steel mills to meet the heavy demands of a rapidly expanding war industry. To get this scrap from its resting place in junk yards, contractors' lots and city storage yards, to the mills, is a job to which the engineering and construction industry can do well. Here are some of the developments of last week:

Louisville, Kentucky's old Post Office Building, which had stood untenanted at 4th and Chestnut Sts. for the last ten years, was beginning to disappear under the hammers of a wrecking concern bent on converting the structure into about 6,000 tons of scrap iron.

★ ★ ★

In Gambier, Ohio, Dr. John Black, head of the speech department of Kenyon College, and chairman of a salvage committee, discovered a 40-ton railroad bridge section buried in a flood in 1913, under 12 ft. of gravel. The recovered span was sold for salvage purposes.

★ ★ ★

Anticipating a metal salvage drive on Oct. 15, the Jenkins Bros. Co. of New York discovered a discarded passenger elevator complete with cables, iron railings and a huge horizontal tubular boiler with firebox and grates installed fifty or sixty years ago and unused in some years.

★ ★ ★

The War Production Board announced a nationwide industrial dormant scrap campaign to obtain obsolete machinery, tools, equipment, dies, jigs and fixtures for the steel mills. Industrial executives will be asked to make an inventory of all dormant scrap materials, and that, according to Lessing J. Rosenwald, director of the WPB drive, is any machine that has not been used for at least three months and has no prospect of use within the next three months.

★ ★ ★

The Oregon Highway Commission has arranged for state highway trucks to get scrap metal placed near highways by citizens, transporting the metal to the nearest salvage depot.

★ ★ ★

The stills developed by Dr. William M. Burton at Whiting, Ind., for the Standard Oil Co. of Indiana, when he invented the first commercial process for cracking petroleum, were contributed to the scrap drive. The Whiting plant alone produced about 5,000 tons of scrap.

★ ★ ★

At Charlotte, N. C., the Blythe Bros. Construction Co. chalked up a contribution of 400,000 lb. of metal to the salvage campaign, including a steam shovel, three road rollers, crawler tracks, and a complete asphalt plant.

★ ★ ★

The machinery from an ancient and long forgotten rice mill on a South Carolina plantation near Charleston, also went into the drive. The power wheel, cast iron, measured about 10 ft. in diameter and alone weighed nearly 4 tons. So massive and heavy were some of the machinery parts that they had to be broken up with sledges before being transported. Saplings and other small trees and brush which had grown up around the abandoned machinery had to be cut away.

★ ★ ★

At Lakeland, Fla., the John E. Ballenger Construction Co. turned in 62,000 lb. of scrap from company properties.

★ ★ ★

The Third Avenue Elevated Committee, a group of property owners advocating demolition of New York City's last remaining elevated railway line, saw in the scrap drive a means of achieving its pet project, and began a campaign by poster, advertisements and personal solicitation. The group estimated that the old transit line—characterized as an "antiquated accumulation of rust"—will yield 50,000 tons of vital metals, plus rails. Projected is demolition of the structure from 125th street to City Hall—with a new subway line to be built after the war as a replacement.

★ ★ ★

Out in Texas, the Corps of Engineers put its troops to work to demolish two abandoned steel bridges near San Antonio, to recover an estimated 400,000 pounds of scrap. One of the bridges, 240 ft. long, crosses the Colorado River, the other crosses the Brazos River.

★ ★ ★

The Corps of Engineers also turned up another "mine" of critical metals—in an old artillery and rifle-range at Fort Knox, Ky. Bulldozers skim off the tops of target backstops in thin lays, then the soil is hosed, as in placer mining, to recover lead, copper, brass and other metals. The war department said that if the yield from this "mine" is sufficient, other target ranges throughout the country will also be mined.

★ ★ ★

As evidence of the coming accent on recovery of the tin and steel contained in the common tin can, the H. K. Ferguson Co. said it had been awarded contracts to design and construct facilities that will virtually double the nation's present detinning capacity. Principal supply source for the new plants will be a can salvage drive scheduled to start soon.

BRIDGE IS UNCLE SAM'S!
Landmark of the City of Minneapolis containing 460 TONS of Steel.
GIVEN BY THE CITY TO THE Government Scrap Salvage Campaign IN THE FIGHT FOR FREEDOM
Is enough Scrap to make 4000 AERIAL BOMBS
NOW THE PROPERTY OF U.S. GOVERNMENT SPECIAL PROJECT SALVAGE SECTION, WPB.

Press Assn. Photo

Tons of scrap for the nation's war effort are represented in this old bridge on 10th Avenue in Minneapolis, Minn. Mayor Marvin S. Klein, shown at right, hangs sign on the abandoned structure to let citizens know that the bridge will see service again—in the form of war materiel.

• • •

California opens new road to shipyards

The California division of highways recently opened to traffic a new 5-mi. long, four-lane divided express highway to provide direct access to Richmond, Cal., shipyards from the Oakland end of the San Francisco-Oakland Bay Bridge.

The project, financed with $883,000 of federal access road funds, is expected to serve about 25,000 workers daily.

Press Assn. Photo

Water tank goes to war

This abandoned 138,000-gal. water tank may become a tank of another sort soon, after it is melted up and converted into war materials.

One of two tanks built in 1913 to provide water pressure in a high lying part of Washington, D. C., this storage unit has been abandoned since 1932. The tank itself is 30 ft. in diameter, and with its 72 ft. tower is expected to yield 71,000 lb. of metal.

Army engineers save metal in camp construction

Savings of about 26,000 tons of metal, including steel and copper, are being effected by the Corps of Engineers in the construction of complete camp facilities for the housing of soldiers on a 100,000-man basis.

Last year, it required about 50,400 tons of metal to install complete camp facilities for every 100,000 soldiers. This included all the steel, copper, tin, iron, lead and other metals and went into barracks, mess halls, storerooms, chapels and other buildings, and into the necessary sewage, water, electrical and transportation systems.

Today, the Engineers are using about 33,400 tons of these metals for every 100,000 men, 44 percent less than last year.

Chief reason for the saving is said o be a change in the type of facilities from the semi-permanent structures of a year ago to temporary structures today. For example, barracks of the newer camps have outside walls of tar paper, held down by laths and slats, and are one-story buildings. Heat in the newer barracks is supplied by stoves. Concrete and wood pipe sewage lines are replacing cast iron pipe; where enough room is available, sanitary fills are being used instead of refuse incinerator plants; brass in plumbing fixtures has virtually disappeared, and copper screening has been eliminated in favor of zinc-coated steel.

Venezuela completes railroad network

Venezuela has completed an important link in its railway system—the 35-mile El Palito-Palmasola Railroad, to join by rail an area in which a third of the population of the country is concentrated.

Although the nation is about the size of Texas and Minnesota combined, it has a total of only 640 miles of railroads. These lines now join the five most important states—Lara, Miranda, Carabobo, Aragua and Yaracuy; the federal district and the nation's chief ports.

The new railroad provides a connection between the Bolivar and Puerto Cabello, and Valencia Railways. The cost of construction is estimated at $2,209,000. The government has provided 40 freight cars for the line, and an agreement has been made with the connected railroad lines for joint operation.

The railway system as it now exists includes the Bolivar Railway, which runs from the port of Tucacas to Barquisimeto, with a branch from Palmasola to San Felipe; the Puerto Cabello and Valencia Railway, joining Venezuela's second most important seaport, Puerto Cabello, with Valencia. From Valencia, connections are made with Caracas, the capital, and to La Guaira, the principal seaport. Differences in gage prevent through traffic over all routes, but the government envisages the eventual broadening of the important Bolivar line from 2 ft. gage to about 3½ ft.

Canada names new deputy public works minister

Emmett P. Murphy, formerly a director of construction in the Canadian department of munitions and supply, has been appointed deputy minister of public works for Canada, succeeding the late J. B. Hunter.

The deputy minister of the department is the chief permanent official of the organization, to whom report the chief engineer, chief architect and other officers.

Mr. Murphy, 55, is a civil engineering graduate of Queens University, Kingston, Ont. He has been assistant engineer in the old Department of Railways and Canals from 1907 to 1916; superintendent of operations on the Southern Division of the Welland Ship Canal, from 1932 to 1937; construction engineer with the Defense Purchasing Board and the War Supplies Board of Canada, from 1939 to 1940.

• • •

Kaiser steel plant making rapid progress

Construction of a steel mill with a rated capacity of half a million tons per year, being built by Henry J. Kaiser in Southern California, has been progressing rapidly, and it is reported that one and perhaps two of the coke ovens will be ready for operation in the latter part of January next year.

This plant is to reduce a high grade iron ore (about 60 percent iron content) that will be mined at a point where the haul to the plant will be short. Coal is to be brought from Utah to coking ovens at the plant.

Construction of the blast furnace to have a capacity of 1,200 tons per day, is well along with the shell up and in process of being aligned. There are to be four open hearth furnaces of 60 to 80 tons capacity and a 110-in. plate mill. A sintering plant is to reduce fines in the ore to granular form thus reducing the tendency to emission of dust and fumes.

• • •

Canadian cities fear snow removal problems

Officials of at least four Canadian cities last week voiced fears that streets could not be properly maintained during the coming winter, owing to shortages of manpower to man snow removing apparatus. Officials of Montreal, Outremont, Westmount and Verdun said they would be unable to clear streets and sidewalks as in the past, due to inability to obtain proper working forces.

BRIEF NEWS

ATTORNEY GENERAL JACK HOLT, of Arkansas, has ruled that the Arkansas Highway Department can legally enter into a cooperative agreement with the Tennessee Highway Department for maintenance of the Harahan Bridge over the Mississippi River between Memphis, Tenn. and West Memphis, Ark. The highway department asked the ruling before completing plans to set up joint maintenance crews with the Tennessee organization, dividing the cost equally between the two states. Heretofore each state has maintained its side of the span only.

THE Mexican Federal District, which includes Mexico City, is to be provided with adequate water, drainage and illumination services and to have its streets and roads properly paved in a program starting about January 1, according to Javier Rojo Gomez, regent of the District. The program will entail expenditure of at least $3,150,000. Particular attention is to be given water and drainage services, both of which have been faulty for some time.

CONTRACTORS working under the Pennsylvania State Department of Highways have completed 157 miles of new road so far in 1942, as compared with 256 miles for the same period in 1941. Wartime restrictions on critical materials were cited as the reason for the drop in work.

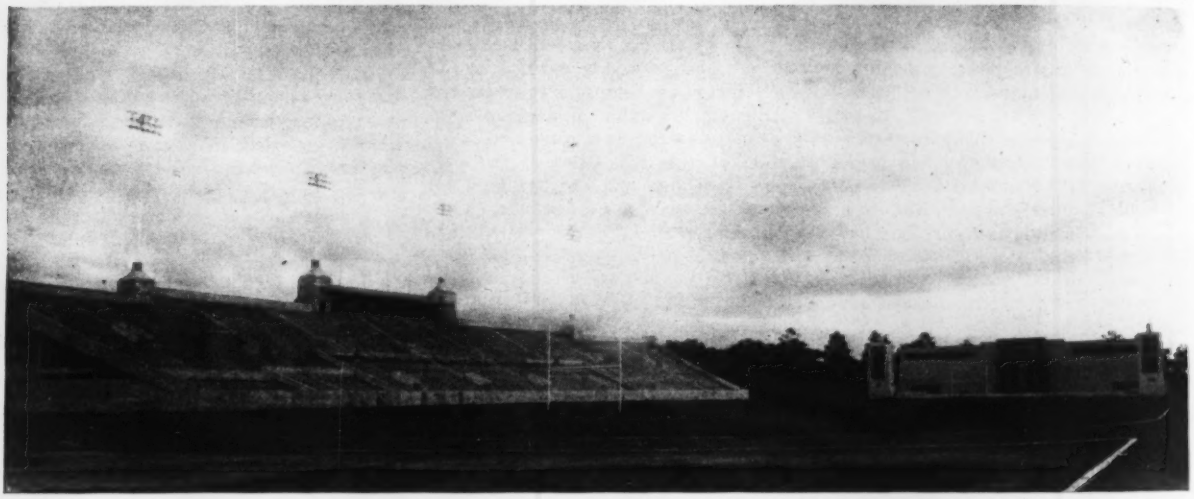
CONSTRUCTION work in Canada has been further restricted by an order issued by the controller of construction of the Department of Munitions and Supply. The order virtually bans all construction in the building field involving the use of higher grade materials. It is designed to discourage building activities in the Dominion other than the erection of inexpensive housing and essential war work. Under the order, for example, it will no longer be possible to install two or more bathrooms in any dwelling unit, to build steel fire escapes, to roof farm buildings with metal or to use any vital materials for ordinary building purposes.

CHARLES L. GAMBLE, president of the Birmingham, Ala. Gas Company said last week that his company will add to its present capacity by about 11,500,000 cu. ft. per day through the construction of new lines and tapping of a new source. Plans call for tapping a new supply of by-product gas from the Woodward Iron Company, involving construction of a plant at the Woodward Company's site, and placing of a 14-in. cast iron pipe line 1¾ mi. long. In addition, it is planned to increase the supply from the Alabama Byproducts Corp. by installing about 2¼ miles of 16-in. pipe to a refining plant already in existence there.

STEADILY decreasing traffic across the Straits of Mackinac has caused a revision of Michigan state ferry schedules, according to G. Donald Kennedy, highway commissioner. A two-boat service has supplanted the former three-boat fall program, with boats departing from either side on a 90-min. headway. Indicative of the progressive monthly traffic drop at the Straits, Labor Day weekend figures revealed a 42.9 percent decrease this year as compared with last. To date, traffic has dropped approximately one-third since January as compared to 1941.

THREE privately-financed war housing projects in the Philadelphia area to accommodate 304 families at a total cost of $1,600,000 have been approved by the Philadelphia Federal Housing Administration.

MAJOR-GENERAL G. C. KENNEY, recently appointed commander of the air forces of the United Nations in the southwest Pacific, is a partner in the Boston civil engineering firm of Kenney & Glazier. A native of Yarmouth, N. S., General Kenney is a descendant of a well known seafaring family.



Houston completes million dollar high school athletic field

Rated the best high school sports arena in the Southwest, this new stadium recently was completed for use by Houston, Tex., high school athletes. The million-dollar arena seats 22,000 people in two facing reinforced concrete and steel grandstands (one of which is shown here) and five parking lots are provided to care for 5,000 automobiles.

The field house, shown in the lower right of the picture, has an inside seating capacity of 2,500, and is arranged for basketball tournaments. It contains dressing rooms for two teams, permanent locker rooms for each of the high schools of the city, and can be fitted as a theatre with a total of 2,250 seats.

Grandstands are 75 ft. high, and are equipped with lights for night games and a public address system. There are five entrances to the stadium, and the playing field includes a football and soccer field and a cinder running track with a 220 yd. straightaway on both sides. Concession stands and restrooms on the ground floor and upper ramps are provided in both grandstands.

R. J. Cummins of Houston was consulting engineer on the project, with Hare & Hare, Houston, as consulting landscape architects and Harry D. Payne, architect for the structure. W. E. Woodruff Co. of Houston was general contractor for the field house. The project was financed by the Public School Athletic Association, supplemented by revenue bonds purchased by the RFC.

OBITUARY

Virgil Lamont Johnson, retired Philadelphia structural engineer, died Oct. 5 at Germantown, Pa. A graduate of the University of Pennsylvania, Mr. Johnson served the board of education at Philadelphia for 33 years, and in 1933 received a medal from the Municipal Engineers' Society for outstanding service as a result of his record in planning construction of 160 public school buildings.

Eugene B. Ford, 61, retired civil engineer of Seattle, Wash., died there recently. Retired eight years ago, Mr. Ford had been active in Seattle engineering affairs since 1919.

E. C. Morrison, 72, Southern Pacific Railroad construction engineer who had charge of the railroad's $3,500,000 relocation program in San Jose during 1935-36, died at San Francisco Oct. 1.

Asa Columbus Baldwin, 55, Seattle, Wash. engineer, died there recently. During his long career, Mr. Baldwin had served with the U. S. Coast and Geodetic Survey, and was a captain with the 29th U. S. Engineers in the first World War. Since May of this year he had been serving in a civilian capacity with the U. S. Engineers.

Walter Mott Tuckwell, 61, retired Milwaukee architectural and construction engineer, died Oct. 5.

Dennis W. Eagan, 40, civil engineer and acting executive secretary of the Tennessee State Planning Commission, died at Donelson, Tenn., on Oct. 3.

William B. Flynt, an engineer in the Birmingham, Ala., building inspection department, died recently.

Gordon A. Lamb, for nearly 50 years an engineer for the Seattle, Wash. city light, water and engineering department, died recently there.

Alton Allen Freeman, 37, construction engineer for the Socony-Vacuum Co., died Sept. 28 at Caracas, Venezuela. Mr. Freeman was a native of Newberry, S. C.

Harold S. Johnston, 57, chief engineer of the Nova Scotia Power Commission, died at Halifax, N. S., Oct. 6.

George Paaswell, 55, chief engineer of the Iranian Mission for the Army—a combine of Foley Brothers and Spencer, White & Prentis—died recently in Iran. Mr. Paaswell had been a designer and section engineer on subway construction for the New York City Public Service Commission and the Board of Transportation; chief engineer for the Corson Construction Corp. and J. Meltzer, Inc.; and had been in charge of construction of two Mississippi River locks.

Maj. Duncan Fraser Dewar, formerly city engineer of Edmonton, Alberta, and later in the construction business in Ontario, died at Lindsay, Ont., Oct. 7.

Robert P. Rogers, 36, a construction engineer at Fort Knox, Ky., died October 8.

Verus Taggart Ritter, 59, architect and president of the Delaware River Tunnel Corporation, died Oct. 6 at Merion, Penna. Among many buildings he designed were the U. S. Custom House, the Drake Hotel, and other structures in Philadelphia. As president of the Tunnel Corporation he was head of a group actively promoting construction of a highway tunnel beneath the Delaware river to connect South Philadelphia and south Jersey points.

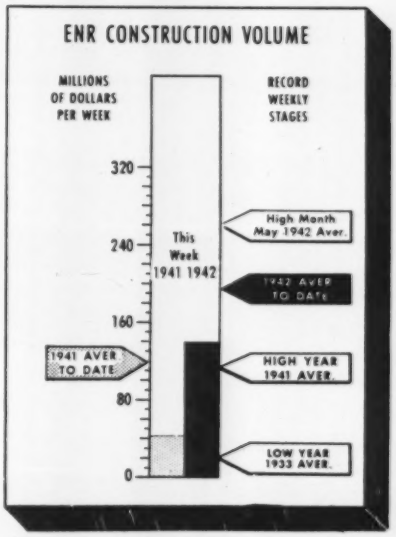
Owen H. Draper, airport engineer for the state of Alabama, died in a Montgomery hospital on October 8.

Fred Elliott, 74, Ohio state armory architect for 26 years, died October 6 while at the state capitol building on business.

CONTRACTS AND CAPITAL

ENGINEERING CONSTRUCTION volume for the week, $157,526,000, is 13 percent higher than in the preceding week, and almost four times as great as the $42,944,000 reported for the holiday-shortened week in 1941. Federal construction, 20 percent above last week, makes up 91 percent of the week's volume and is responsible for the 18 percent gain in public construction as state and municipal work is 0.2 percent below a week ago. Private construction declines 55 percent from its last week's total.

The current week's volume brings 1942 construction to $8,133,308,000, an increase of 60 percent over the total for the corresponding 42-week period last year, and already 38.5 percent above the volume reported for the 52 weeks of 1941. Private construction, $499,869,000, is 50 percent lower than in the period last year, but public work, $7,633,439,000, is 87 percent higher than a year ago as a result of the 136 percent gain in federal work.



In the classified construction groups, gains over the preceding week are in sewerage, streets and roads, and unclassified construction. Increases over the holiday-shortened 1941 week are in waterworks, sewerage, public buildings, streets and roads, and unclassified construction.

New capital for construction purposes for the week totals $342,000. This volume, entirely state and municipal bond sales, compares with $17,290,000 for the week last year.

New construction financing for the year to date, $9,533,420,000, is 61 percent above the $5,909,622,000 reported for the 42-week period in 1941.

CONTRACTS

(Thousands of dollars)

	Week Ending Oct. 16 1941	Oct. 8 1942	Oct. 15 1942
Federal	$ 15,341	$120,051	$143,836
State & Municipal	15,258	8,745	8,727
Total public	$ 30,599	$127,796	$152,563
Total private	12,345	11,059	4,963
TOTALS	$ 42,944	$139,855	$157,526
Cumulative 1942	(42 weeks)		$8,133,308
1941	(42 weeks)		$5,077,189

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1941 42 weeks	1942 42 weeks
NON-FEDERAL	$1,083,504	$566,522
Corp. Securities	318,643	169,889
State & Mun.	363,626	184,478
U.S H.A. loans	30,399	.....
R.E.A. loans	100,500	.....
R.F.C. loans	107,336	129,455
Fed.-Aid—Highways	163,000	82,700
FEDERAL	$4,826,118	$8,966,898
TOTAL CAPITAL	$5,909,622	$9,533,420

ENR INDEX NUMBERS

		1913	1926
Index Base = 100			
Construction Cost	Oct. '42	282.44	135.77
Building Cost	Oct. '42	225.90	122.11
Volume	Sept. '42	544	238

FHA MORTAGES

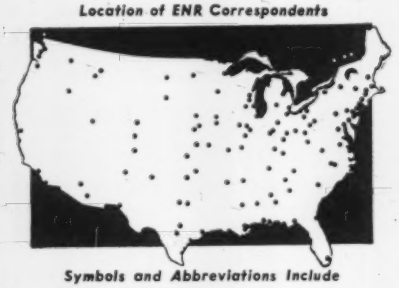
	Week Ending Oct. 11 1941	Oct. 3 1942	Oct. 10 1942
Selected for appraisal			
Title II	$23,922	$6,032	$5,696*
Title VI	$2,883	$17,366	$12,089*

* Subject to revision.

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

Location of ENR Correspondents



Symbols and Abbreviations Include

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily
A-E-M Architect — Engineer-Management type of contract.

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges, Grade Cross'gs
Streets & Roads
Earthwork, Waterways
Unclassified
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR):

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Note: To comply with censorship requirements, addresses on some reports are being generalized. Data which would reveal the purpose of the improvements and the size are withheld. The name of contractor and general area are reported.

WATER SUPPLY

PROPOSED WORK

Minn., St. Paul—W. A. Parranto, comr. Pub. Utilities, City Hall, 6,400 lin. ft. 6- to 16-in. waterline to municipal airport. Over $15,000.

†N. Y., Buffalo—Federal Works Agency, 2 Lafayette St., New York, expanding water facilities. $86,820.

O., Canton—Drilling equipping test water well, etc., northwest water field. $30,000. J. A. Shisler, City Hall, engr.

R. I., North Kingston—Town, Waterworks Comn., WW sys., Belleville Sect., incl. watermain to Oak Hill Rd., pump sta. $15,000. Jenks & Ballou, 2600 Industrial Trust Bldg., Providence, engrs. CD 8/31—ENR 9/3.

★**†Texas**—U. S. Eng., 231 W. Main St., Denison, addnl. water supply facilities, Tarrant Co. $750,000 authorized.

†Tex., Pecos—B. A. Toliver, mayor, exten. water and sewerage sys., Tex. 41-555. $94,301. **FWA.** W. C. Hedrick, 1st Natl. Bank Bldg., Fort Worth, engr.

★**†Va., Suffolk** and **Portsmouth**—Federal Works Agency, 606 State Planters Bank Bldg., Richmond, 6 m.g. filtration plant and 2 m.g. reservoir at Suffolk and 3 m.g. reservoir at Portsmouth, incl. approx. 8,200 ft. 24 in. pipeline in Suffolk and 71,000 ft. 20 in. pipe in Dismal Swamp Area. $835,000.

†Pacific Northwest—U. S. Eng., 800 3 Ave., Seattle, Wash., drilling well.

B. C., Smithers—Water supply from Seymour Lake, WW and sewage scheme. $50,000.

Que., St. Johns—H. Morais, city clk., bids soon, addnl. reservoir at filtration plant. $50,000. E. Gaudette, c/o owner, engr.

BIDS ASKED

Bids Asked After October 24

†Tex., Hooks—Town, J. R. Quinn, mayor, addnl. WW. extens., imprvs., Tex. 41-384. $370,000. FWA. J. J. Rady, 811 Insurance Bldg., Fort Worth, engr. CD 9/29—ENR 10/1.

Bids Asked October 28

†N. Y., Schenectady—City, at office Contract and Supply Com., City Hall, Jay St., structures, equipment, and piping, electrical work, plumbing, heating. **FWA** Project N. Y. 39-141. M. Pirnie, 25 W. 43 St., New York, civil engr. S. Etkin, city clk.; adv. ENR 10/15.

LOW BIDDERS

Michigan—State Hy. Dpt., Oct. 7, pumphouse, Detroit Industrial Expressway at Ecorse Rd., from Couse & Saunders, 12749 Lyndon St., Detroit, **$72,429.** CD 9/30.

†Texas—U. S. Eng., 25 St. and Avenue F, Galveston, drilling, casing, developing water supply wells, electric motors and gasoline engine standby units, Limestone Co., from A. H. Masiran, P.O. Box 190 Corpus Christi, under **$50,000.** CD 10/5—ENR 10/8.

CONTRACTS AWARDED

Calif., Pittsburg — Exten. water sys., day labor. Bids 10/5 rejected. CD 9/22—ENR 9/24.

Conn., Hartford — City, Metropolitan Dist. Water Bureau, 1026 Main St., 3500 ft. pressure water supply line, East Hartford, to F. B. O'Neil, 22 Preston St., **$21,300.**

Conn., Waterford—Quaker Hill Mill, c/o P. Chrisfensen, Newark, N. J., reconstructing dam, water facilities, mill alterations, to Hazard Constr. Co., 48 West St., East Greenwich, R. I.

†Illinois—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., filtration plant and raw water pump. sta., to E. H. Marhoefer, Jr., Co., 222 W. No. Bank St., Chicago***sewage treatment plant, to J. J. Duffy, 176 W. Adams St., Chicago***sanitary sewage collection sys., to Gjellefald Contg. Co., Cedar Rapids, Ia.***electric distr. sys., to A. A. Electric Co., 3125 S. 6 Court, Cicero, all above work in Fulton Co. CD 9/14—ENR 9/17, under Public Bldgs.

†Maryland—U. S. Eng., Standard Oil Bldg. Baltimore, water range and main front, Harford Co., to Boyd H. Kline, Bloomsburg, Pa. Est. **$50,000-$100,000.**

Md., Elkton—Cecil Co., water line, to Chas. J. Spielman Co., 2210 Russell St., Baltimore. R. T. Register, Baltimore Life Bldg., Baltimore, engr.

Michigan—State Hy. Dpt., Lansing, pumphouse, etc., Detroit Industrial Expressway and Pelham Rd., to Peninsular Constr. Co., 127 Federal Sq. Bldg., Grand Rapids, **$24,416.** Bids 9/23. CD 9/16.

†Missouri—U. S. Eng., P. O. Box 97, Memphis, Tenn., well, Dunklin Co., to Massey & Watson, 3464 Summer Ave., Memphis, Tenn. Est. under **$50,000.**

O., Cincinnati—Cleaning, lining 36 in. distr. main with cement and mortar, to Centriline Corp., 140 Cedar St., New York, N. Y., **$33,376.** Bids 9/23. H. H. Kranz, city engr.

†Texas—U. S. Eng., Fort Sam Houston, water supply and distr. sys. sanitary sewerage and gas distr. sys., Spec. 42-284 (A2-1.) Taylor Co., to Panhandle-Sira-Dalton, P. O. Box 506, McGregor, over **$100,000.** CD 9/23.

†Texas—U. S. Eng., 231 W. Main St., Denison, water distr. sys. and sanitary sewer lines, Bowie Co., to Asplund Constr. Co., 501 E. Oak St., Enid, Okla., over **$100,000.** Awarded 10/5.

†Utah—U. S. Eng., 32 Exchange Pl., Salt Lake City, reservoir and water distr., Tooele Co., to Harrison Dorman Co., 224 Terminal Bldg., Salt Lake City, less than **$100,000.**

†Washington—U. S. Eng., 810 3 Ave., Seattle, test well, Spokane Co., to W. A. Hale, Cut Bank, Mont., under **$50,000.**

†Washington—U. S. Eng., 800 3 Ave., Seattle, drilling, casing and testing well, Skagit Co., to J. J. Bell & Son, 6116 4 Ave. S., Seattle, under **$50,000.**

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Conn., Greenwich—Town, W. Johnston, P. Wks. Dpt., Town Hall, drainage facilities, various sections. $100,000. S. E. Slater & Co., Inc., Smith Bldg., engr.

Mich., Alpena—Sewage disposal sys. Approx. $100,000. Shoecraft, Drury & McNamee, Ann Arbor, engrs.

Tex., Orange—A. Sokolski, mayor, sewerage and disposal plant. $61,056. Applied for FWA funds. C. F. Smith, Orange, engr.

†Tex., San Antonio—City, C. K. Quin, mayor, sewage plant imprvs, Tex. 41-403. $88,500. **FWA.** H. P. Drought and H. R. F. Holland, Frost Bldg., and W. E. Simpson Co., Milam Bldg., engrs.

†Tex., Texarkana—City, c/o W. V. Brown, mayor, sewage disposal plant, Tex. 41-355. $100,000. **FWA.** J. J. Rady, Insurance Bldg., Fort Worth, engr.

BIDS ASKED

Bids Asked October 19

†Va., Newport News—Dpt. P. Wks., incinerator addn. **FWA** 44-120. $79,000. Plans deposit $10.

Bids Asked October 20

Ind., Fort Wayne—Bd. Wks., addnl. sewer connections. $40,000.

Bids Asked After October 24

†Tex., Hooks—J. R. Quinn, mayor, addnl. sewerage sys. exten., imprvs., Tex. 41-384. $425,000. **FWA.** J. J. Rady, 811 Insurance Bldg., Forth Worth, engr. CD 9/29—ENR 10/1, under Waterworks.

Bids Asked About November 2

†Tex., Fort Worth—Tarrant Co. Water Control & Imprvt. Dist. 3, c/o J. R. Mecker, pres., sewer control and imprvs., Tex. 42-433 or 433. $224,725. **FWA.** J. J. Rady, 811 Insurance Bldg., engr. CD 9/29—ENR 10/1.

Bids Asked

†Texas—U. S. Eng., 231 W. Main St., Denison, sewage treatment plant, Gray Co., over $25,000, water storage and pump. facilities. Over $15,000. Plans deposit $50 ea. project.

Tex., Houston—C. A. Pickett, mayor, replacement Scott St. sewers, imprv. South End Dist. $80,000. J. G. Turney, dir. P. Wks.

LOW BIDDERS

Md., Towson—Comrs. Baltimore Co., Oct. 5, 5,700 lin. ft. 6 and 8 in. vitr. sewers, Contr. 67S, from Peter D'Adamo Constr. Co., 7 W. 25 St., Baltimore, **$24,488.** CD 9/30.

Michigan—State Hy. Dpt., Lansing, Oct. 7, 2 deep sewer lines, Detroit Industrial Expressway at Inkster and Jim Daly Rds., from The Waterway Constr. Co., 22240 W. 8 Mile Rd., Detroit, **$92,970.** CD 9/30.

N. Y., Manhasset—Bd. Supervs. Nassau Co., Old Courthouse Bldg., Mineola, Sept. 15, 11,500 ft. trunk sewer, Strathmore Sect., from T. & T. Contg. Co., 1066 60 St., Brooklyn, **$103,838.** Est. $140,000. CD 9/10.

N. Y., Great Neck—Bd. Comrs., Belgrave Sewer Dist., Little Neck, Oct. 5, imprv. sewerage sys. from S. Tarascio, 24 Clinton St., Port Chester, **$139,378.** CD 9/28—ENR 10/1.

Wis., Manitowoc—A Post, city clk., Oct. 5, 3,500 ft. 21 in. intercepting sewer, from Bahr Constr. Co., 2204 S. 10 St., **$54,218.** CD 9/29.

CONTRACTS AWARDED

Conn., Stratford—Sewer Dpt., lateral sewers Wilcoxson and Rockaway Aves., Fairlea and Park Sts. Owner builds. **$30,000. M.** Jankowski, town engr.

†Florida—U. S. Eng., Court House, Jacksonville, sewerage collection sys., Inc. Neg. Jax 43-258. Dixie Co., to Gabel-Rosa Co., 427 W. Bay St., Jacksonville, under **$50,000.**

†Georgia—U. S. Eng., Post Office, Savannah, sewerage sys., Liberty Co., to Pierce Constr. Co., Columbus.

†Mississippi—U. S. Eng., U. S. Post Office & Courthouse, Vicksburg, addns. alterations sewage disposal facilities, to L. O. Bruyton & Co., Dyersburg, Tenn. under **$50,000.**

†Mississippi—U. S. Eng., U. S. Post Office & Courthouse, Vicksburg, outfall sewer and exten. sewerage collection sys., Lauderdale Co., to Morrissey & Knost, Vicksburg, **$50,000-$100,000.** Bids 9/29. Awarded 10/2.

†Texas—U. S. Eng., 25 St. and Avenue F, Galveston, sewage treatment plant, Robertson Co., to Taylor Constr. Co., Taylor, **$50,000-$100,000.**

★**†Utah, Clearfield**—North Davis County Metropolitan Sewer Dist., c/o Caldwell &

SEWERS, etc. (Contracts Awarded, Cont'd.)

Richards, engrs., Templeton Bldg., and Sumner Margetts, engr., Felt Bldg., all of Salt Lake City. (1st unit) sanitary sewerage sys. serving North Davis Co., to Stroud-Seabrook Co., Bakersfield, Calif., approx. **$800,000. FWA.** CD 9/4—ENR 9/11 under Layton, Utah. Bids 9/23.

†Washington—U. S. Eng., 800 3 Ave., Seattle, sanitary sewer and water distr. sys. and sewerage sys., Spokane Co., to R. L. Barr, W 1220 Ide St., Spokane, **$100,000-$500,000.** CD 10/9.

Ont., St. Thomas—Digestion chamber, imprv. sewage disposal plant, No. 4 Hy., to Duncan McDougall, Bluevale, **$26,143.** Gore & Storrie, 1129 Bay St., Toronto, engrs. CD 8/12—ENR 9/20.

Que., Cap de la Madeleine—Exten. sewerage sys., to Laviolette Constr. Co., Ltd., 453 Laviolette St., Three Rivers, **$28,000.** J. E. Fleury, c/o owner, engr.

BRIDGES, GRADE CROSSINGS

BIDS ASKED

Bids Asked October 20

Ohio—State Hy. Dpt., Columbus, altering concrete substructure, constructing continuous concrete girder bridge over North Fork Licking River, Sect. F of SH 337, Licking Co. $36,290.

LOW BIDDERS

Michigan—State Hy. Dpt., Lansing, Oct. 7, grade separation, concrete railings, Wayne Co., from Walter Toebe & Co., 624 Kipling St., Lansing, **$25,384.** CD 9/30.

CONTRACTS AWARDED

Utah—State Road Comn., Salt Lake City, bridge, Weber Co., to Young & Smith Constr. Co., 1678 Browning Ave., Salt Lake City, **$59,442,** est. $52,995. Bids 10/5. Received no bids 10/5, bridge extens., Tooele Co., project postponed until next spring. CD 9/24.

STREETS AND ROADS

BIDS ASKED

Bids Asked October 20

★**Ohio**—State Hy. Dpt., Columbus, grading, draining, waterbound macadam paving 0.18 mi. Sect. Summitville of SH 677, Columbiana Co.; waterbound macadam widening 2.739 mi. Sect. North Olmstead of SH 694, Cuyahoga Co., $63,050; grading, tar concrete widening, concrete resurfacing 3.727 mi. Sects. K & I of SH 155, U.S. 33, Hocking Co., $72,160; concrete resurfacing 1.521 mi. Sect. Lorain of SH 3, U.S. 6, Lorain Co., $30,600 1.097 mi. Sect. Clyde of SH 274, U. S. 20, Sandusky Co., $18,810; grading, draining, concrete paving, roadside imprv., constructing continuous beam bridge with concrete substructure over Mahoning River, on Sect. Q of SH 12, Portage Co., $328,200; grading, draining, concrete paving, roadside imprv., constructing concrete beam bridge, concrete substructure over Mahoning River on Sects. W and T, of SH 87, U.S. 224, Portage and Mahoning Counties, $714,000.

Bids Asked October 20

O., Cleveland—Comrs. Cuyahoga Co., G. H. Stahler, clk., asphalt paving Berea Rd. $31,500. Rejected bids 9/18. J. O. McWilliams, Standard Bldg., engr. CD 9/10.

Bids Asked October 21

North Carolina—State Hy. & P. Wks. Comn., Raleigh, grading 2.33 mi. U.S. Route 158, Project 1111, Camden Co. $300,000-$400,000. Plans deposit $5. W. V. Baise, Raleigh, engr.

Bids Asked October 22

Nebraska—State Dpt. Roads & Irrigation, Lincoln, gravel surfacing 10 mi. Swedeburg-Memphis, A1-FAD 134-A; 1/7 mi. State Rd., Ainsworth-Brewster, 393-L; Rockford-Burchard and Rockford-Crab Orchard, Patrol 11025 and 11029; Strang-Western, Patrol 11039; Diller, north and south, Patrol 11043; Friend south Patrol 11064; Polk-Gresham Patrol 21003; Shelby-Waco, Patrol 21004; Exeter-Waco, Patrol 21005; Albion-Fullerton and Albion-Spalding and Boone west Patrol 31003, 31058, 31080, 31097; Albion-Elgin, Patrol 31004; Pierce-Wausa, Patrol 31010; Pender-Emerson, Patrol 31025; Hartington-Bloomfield Patrol 31053; Elgin-Bartlett Patrol 31057; Pierce-Wayne Patrol 31061; Belden-Winside, Patrol 31062; Cedar Rapids-Primrose and St. Edward-Greenley Center, Patrol 31076 and 31077; Kimball south Patrol 51005; Harrisburg-Redington, Patrol 51007. W. G. Scott, state engr.

Bids Asked October 23

Kentucky—Dpt. Hys., Frankfort, grading, draining, high type surfacing 1.28 mi. Rice Springs Rd., McCracken Co. Received no bids 10/9. CD 9/22—ENR 9/24.

Bids Asked October 28

New York—State Dpt. P. Wks., Div. Hys., Albany, imprv. 17.77 mi. hys. Clinton, Jefferson and St. Lawrence Counties; concrete slab bridge, paving 0.18 mi. Niagara Co. Plans deposit $40. A. W. Brand, supt. P. Wks.; adv. ENR 10/15.

Bids Asked

California—State Div. Hys., Sacramento, rejected bids Sept. 16, imprv. 1.9 mi. Monterey Co. CD 9/21—ENR 9/24 under LB.

Tennessee—State Road Dpt., Nashville, received no bids Oct. 9, imprv. 2,049 mi. Shelby Co. CD 9/29—ENR 10/1.

LOW BIDDERS

Alabama—State Hy. Dpt., Montgomery, Oct. 2, imprv. 11.2 mi. Dallas Co., from Georgia-Alabama Road Constr. Co., Comer Bldg., Birmingham, **$104,500.** CD 9/25.

California—State Div. Hys., Sacramento, Oct. 7, imprv. 2.9 mi. Monterey Co., from Granite Constr. Co., Box 900, Watsonville, **$261,212;** 2.5 mi. Alameda Co., from Lee J. Immel, Box 65, Sta. A, Berkeley, **$277,035.** CD 9/18—ENR 9/24.

California—State Div. Hys., Sacramento, Oct. 7, imprv. 1.1 mi. Solano Co., from A. G. Raisch, 2048 Market St., San Francisco, **$68,415.** Received no bids 10/7, imprv. 1.1 mi. Solano Co. CD 10/2.

Indiana—State Hy. Comn., Indianapolis, Oct. 6, imprv. 1.933 mi. Lake Co., from J. C. O'Connor & Sons, Inc., 2104 Miner St., Fort Wayne, **$158,208,** est. $159,948. Rejected bids Oct. 6, imprv. 3.2 mi., 1.54 mi. and 3.9 mi. roads Vermillion Co., 0.79 mi. St. Joseph Co., 3.5 mi. Miami and Cass Counties, will readvertise. CD 9/30.

Iowa—State Hy. Comn., Ames, Oct. 6, imprv. 7.643 mi. Mills Co., from Fred Carlson Co., Decorah, **$289,431.** CD 9/25—ENR 10/1.

Kan., Kansas City—H. Payne, city clk., paving Roswell Trafficway from 7 St. Trafficway to Manorcrest Dr., from L. G. Barcus Constr. Co., 1051 State St., est. **$50,000.** T. Schlup, city engr.

Kentucky—Dpt. Hys., Frankfort, Oct. 9, imprv. 1.591 mi. Jefferson Co., from Highland Co., Inc., 644 Baxter St., Louisville, **$92,542;** roadside imprv. 11.675 mi. Shelby Co., from Louisville Nurseries, Shelbyville Rd., Louisville, **$39,018.** Received no bids 10/9, imprv. 1.281 mi. McCracken Co. CD 9/22—ENR 9/24.

Maryland—State Rds. Comn., Baltimore, Oct. 6, imprv. 1.436 mi. Contr. BC 167-766, from American Paving & Contg. Co., 2525 Loch Raven Rd., Baltimore, **$340,245.** CD 9/30.

Michigan—State Hy. Dpt., Escanaba, Oct. 2, imprv. 0.555 mi. Chippewa Co., from C. G. Bridges, Escanaba, **$27,194;** 1.695 mi. Chippewa Co., from Lewis & Frisinger Co., and E. B. Schwaderer, 214 Madison St., Ann Arbor, **$227,921.** CD 9/30.

Michigan—State Hy. Dpt., Lansing, imprv. 0.343 mi. Genesee Co., from Edw. H. Porath, 702 Transportation Bldg., Detroit, **$44,732***** 0.27 mi. Saginaw Co., from The Christman Co., Kalamazoo St. Plaza, Lansing, **$39,938***0.564** mi. Ottawa Co., from J. W. Hobeck, R.F.D. 1, Holland, $31,426. CD 9/30.

New Jersey — S. Miller, comr. State Hy. Dpt., Trenton, Oct. 5, imprv. 2.618 mi. Passaic Co., from Franklin Contg. Co., 20 Washington Pl., Newark, **$465,459.** CD 9/23—ENR 10/1.

N. Y., New York—President Bronx Boro, Bronx County Bldg., 851 Grand Concourse, Oct. 6, imprv. Brook Ave., E. 135, E. 158, and E. 160 Sts., from Venetian Constr. Co., Ryawa Ave. and Baretto St., **$118,160.** CD 10/1.

Ohio—State Hy. Dpt., Columbus, Oct. 6, imprv. 6.437 mi. Knox Co., from Boyd & Cook Co., 801 Gas & Electric Bldg., Dayton, **$62,087** est. $62,100***6.501 mi. Lucas Co., from S. E. Johnson Co., 218 Terminal Bldg., Toledo, **$32,499** est. $32,500***7.279 mi. Portage Co., from Ohio Road Improvement Co., 341 Chamber of Commerce Bldg., Columbus, **$87,979,** est. $89,930. Received no bids Oct. 6, imprv. 5.986 mi. Coshocton Co. CD 9/28—ENR 10/1.

†Oklahoma—U. S. Eng., 416 Wright Bldg., Tulsa, roads, streets, drainage facilities, No. 957-Neg-43-67, Oklahoma Co., from A. G. Sherwood Const. Co., Independence, Kan., **$100,000-$500,000.**

†Texas—U. S. Eng., Fort Sam Houston, Sept. 29, construction and asphalt paving streets, roads, drainage work, Spec. 42-282, Taylor Co., from Bradford & Smith, Haskell, **$50,000-$100,000.**

Texas—State Hy. Comn., B. P. Gentry, chn., Austin, Oct. 9, imprv. 2.976 mi. Hy. 81, Lafayette St., Laredo, Webb Co., from H. B. Zachry, Laredo and Harding Blvd., San Antonio, **$68,500.** Est. $80,000.

★**Virginia**—Dpt. Hys., Richmond, Oct. 6, paving 5.1 mi. Warwick Co., from Heckler Bros., Highland Springs, **$483,031*****4.5 mi. Pulaski Co., from Pendleton Constr. Corp., Wytheville, **$453,439*****1.3 mi. Norfolk Co., from W. H. Scott, Inc., Franklin, **$133,714.** CD 9/28 and 10/2—ENR 10/1.

Washington—State Hy. Dpt., Olympia, Oct. 6, imprv. 1.071 mi. Clark Co., from P. W. Yett, 6500 N.E. Ainsworth St., Portland, Ore., **$101,702;** 0.784 mi. Pierce Co., from Woodworth Co., 1200 E. D St., Tacoma, **$54,164.** Received no bids imprv. roads Yakima and Columbia Counties. CD 9/22 and 9/30—ENR 9/24.

CONTRACTS AWARDED

†Alabama — U. S. Eng., Gadsden, paving, grading, electrical work, Etowah Co., to James G. Lawrence & Co., Red Rock Bldg., Atlanta, Ga. Est. **$75,000.**

†Arkansas—U. S. Eng., 300 Bway., Little Rock, roads and drainage, to Gregory-Hogan, 115 N. Spring St., Little Rock. Awarded 9/25.

†Florida—U. S. Eng., Court House, Jacksonville, roads, Inv. Neg. Jax 43-169, Duval Co., to James H. Craggs Constr. Co., Ocala, under **$50,000;** water and sewerage sys., Inv. Neg. Jax. 43-272, to Paul Smith Constr. Co., 320 Rome Ave., Tampa, est. under **$500,000.**

Ill., Rock Island—Paving 7 Ave. from 24 to 46 Sts., to Ben K. Stillfield Constr. Co., 517 12 St., **$112,915.**

★**Indiana**—State Hy. Comn., S. G. Hadden, chn., Indianapolis, imprv. 8.419 mi. Johnson Co., to Calumet Paving Co., 309 W. Washington St., Indianapolis, **$509,167.** Est. $517,493. Bids 9/15, awarded 10/6. CD 9/18—ENR 9/24, under LB.

†Louisiana—U. S. Eng., foot of Prytania St., New Orleans, streets, railroad and parking area, to R. B. Tyler Co. and Couch Constr. Co., Hammond. Awarded 10/1.

★**†Michigan**—U. S. Eng., 700 Union Guardian Bldg., Detroit, gravel roads, service drives, walks, Crawford Co., to Paul C. Miller, Sparta, less than **$1,000,000.**

Mich., Saginaw — Bituminous resurfacing streets, to Midland Contg. Co., 206 E. Main St., Midland, **$61,740.** A. Eckert, Saginaw, city engr.

†Missouri—U. S. Eng., P.O. Box 97, Memphis, Tenn., gravel and surfaced treated roads, drainage, pistol range, Dunklin Co., to Cartwright Constr. Co., Walnut Ridge, Ark., **$100,000-$500,000.** Bids 10/2. CD 9/28.

†New Jersey—U. S. Eng., 6 and Walnut Sts., Phila., Pa., asphalt penetration macadam roads, Monmouth Co., to Joseph Nesto & Co., 872 Bway., Newark, under **$50,000.**

N. Y., Dunkirk—Repaving various streets intersecting Roberts Rd. and E. 2 St., own forces. **$25,000.** A. G. Walter, city engr.

★**N. Y., Jamaica—Transit Comn.,** 270 Madison Ave., New York, permanent hy. facilities, Georgia Ave. to Van Wyck Blvd., Contr. 11, Project 2711, for Long Island R.R. Co., Penna. Sta., New York, to Rusciano & Son Corp., 728 E. 242 St., New York. Est. **$2,000,000.** CD 8/27—ENR 9/3, under LB.

†Oregon—U. S. Eng., Pittock Block, Portland, grading, paving, drainage, Jackson Co., to R. Olson & H. I. Hamilton, Medford, over **$100,000.**

†Texas—U. S. Eng., 231 W. Main St., Denison, constructing and paving roads, asphalt surfacing, grading, No. 257-43-53 part Bowie Co. to W. S. Crawford, 4817 Montrose St., Dallas, **$50,000-$100,000.** CD 9/9.

★**†Texas**—U. S. Eng., Fort Sam Houston, roads, parkways, Spec. 42-417 (T3-17), Brown Co., to H. Page, P. O. Box 971, Austin, over **$500,000.** Bids 10/1.

†Texas—U. S. Eng., Fort Sam Houston, access roads, Spec. 42-355 (T1-11) Bell Co., to M. E. Ruby and Wallace & Bowden, 2101 Enfield St., Austin, over **$100,000.**

†Texas—U. S. Eng., Fort Sam Houston, addnl. construction, paving, Spec. 42-458, Bastrop Co., to H. Page, Box 971, Austin, **$50,000-$100,000.**

†Texas—U. S. Eng., 25 St. and Avenue F, Galveston, asphalt paving, drainage work, Harris Co., to Brown & Root, Inc., 4300 Calhoun Rd., Houston, **$50,000-$100,000.**

Utah—State Rd. Comn., Salt Lake City, imprv. 11.1 mi. Toole Co., to Clifford Prince, 2265 Lake St., Salt Lake City, **$24,511.** Est. $24,715. Bids 10/5. CD 9/24—ENR 10/1.

†Washington—U. S. Eng., 800 3 Ave., Seattle, concrete paving, King Co., to A. F. Mowat, 1331—3 Ave., Bldg., Seattle, under **$50,000.**

†Washington—U. S. Eng., 800 3 Ave., Seattle, concrete paving, Spokane Co., to J. H. Collins, Box 56, Spokane, **$50,000-$100,000.**

Ont., Simcoe—Dpt. Natl. Defense, Ottawa, paving parade grounds, Army Training Camp, to R. A. Blyth Constr. Co., Ltd., 7 St. Andrews Garden, Toronto, **$28,000.**

EARTHWORK, WATERWAYS

PROPOSED WORK

Louisiana—Cities Service Oil Co., 70 Pine St., New York, N. Y., dredging 15 to 35 ft. below mean Gulf level, 4,500 ft. long, Calcasieu Parish.

La., Abbeville—Prairie-Gregg D. D. 2, E. Golden, secy., Erath, drainage work. $30,000.

LOW BIDDERS

†California—Bureau Reclamation, Customhouse, Denver, Colo., Oct. 1, fabricated pipe, fittings, appurtenances for control of 102 in. conduit tube valves at elevations $42 and 942 Shasta Dam, Kennett Div., Central Valley Proj. Spec. 1667-D, Shasta Co., from Steel Tank & Pipe Co. of California, 1100 4 St., Berkeley, **$64,000.** CD 9/16—ENR 9/24.

Miss., Biloxi—City, Oct. 6, small craft harbor, incl., causeway, seawall, creosoted timbers,

EARTHWORK, etc. (Low Bidders, Cont'd.)

roads, bldgs., etc., from C. A. Thompson, Biloxi, **$85,787.** Est. $50,000-$100,000. CD 9/21—ENR 9/24.

CONTRACTS AWARDED

†Arkansas—U. S. Eng., U. S. Post Office & Courthouse, Vicksburg, Miss., 1,190,000 cu. yd. earthwork on west side of Mississippi River, Proj. 1106-43-49, Desha Co., to Hughes Constr. Co., Wilson, **$100,000-$500,000.** Bids 9/25, awarded 10/2. CD 9/14—ENR 9/17.

†Massachusetts—U. S. Eng., Park Sq. Bldg., Boston, dredging materials from waterways, No. 175-43-NEG 99, Suffolk Co., to Bay State Dredging & Contg. Co., 62 Condor St., East Boston. Est. **$25,000.** Bids 10/5.

W. Va., New Martinsburg—Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh, Pa., dredging 165,000 cu.yd. harbor at new plant, Natrium, near here, day labor. Over **$18,000.** CD 9/17—ENR 10/1.

B. C., Esquimalt—Dpt. Pub. Wks., Ottawa, Ont., dredging, to McKenzie Barge & Derrick Co., Ltd., Victoria St., Vancouver, **$45,680.** CD 7/8—ENR 7/16.

UNCLASSIFIED

PROPOSED WORK

★**†Connecticut** — IMPROVEMENTS — U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., imprvs. $500,000. CAA.

†Fla., Naples — IMPROVEMENTS — Town, plans imprvs. $400,000. CAA.

★**†Fla., Zephyrhills** — IMPROVEMENTS — Town, plans imprvs. $500,000. CAA.

†Kansas—GASOLINE SYSTEM, etc.—U. S. Eng., Albuquerque, N. M., bids late in October gasoline and fueling sys., incl. steel tanks, concrete pits, pump unit, pipelines, etc., Ford Co. Over $25,000.

★**†Kansas**—IMPROVEMENTS—U. S. Eng., 416 Wright Bldg., Tulsa, Okla., imprvs., bldgs. Under $1,000,000. Overend & Boucher, Brown Bldg., Wichita, archts.

Kansas—PARK—State Fish & Game Comn., Topeka, game preserve park, dams, lake, drainage, game refuge, etc., Cheyenne Co. $360,000.

†Louisiana—IMPROVEMENTS — Civil Aeronautics Admin., 14 St. between E St. and Constitution Ave. N.W., Wash., D. C., imprvs. $308,784.

★**†Louisiana** — IMPROVEMENTS — Civil Aeronautics Admin., 14 St. between E St. and Constitution Ave. N.W., Wash., D. C., imprvs. $1,036,926.

†Louisiana—IMPROVEMENTS—Civil Aeronautics Admin., 14 St. between E St. and Constitution Ave. N.W., Wash., D. C., imprvs. $437,622.

Louisiana—IMPROVEMENTS—Delta Shipbuilding Co., c/o Mr. Carpenter, Industrial Canal, New Orleans, soon lets contract imprvs.

Louisiana — PIPELINE — Shell Pipe Line Corp., Shell Bldg., Houston, Tex., installing, maintaining 10 in. pipeline on bottom under and across Hudson River, Calcasieu Parish.

★**†Mississippi** — IMPROVEMENTS — Civil Aeronautics Admin., 14 St. between E and Constitution Ave. N.W., Wash., D. C., imprvs., Adams Co. $593,325.

Mo., Springfield — IMPROVEMENTS—Voted $350,000 bonds, imprvs. H. B. Carr, mayor. CD 9/22—ENR 9/24.

Neb., Gering — IMPROVEMENTS — A. L. Smith, city clk., imprvs. $65,000. Seeking CAA participation.

†New Mexico—FUELING and GASOLINE SYSTEMS—U. S. Eng., Albuquerque, fueling and gasoline fueling sys., steel tanks, pump. unit, pipelines, concrete pits, etc., De Baca Co. Over $25,000.

†New Mexico—UNDERGROUND UTILITIES, etc.—U. S. Eng., Albuquerque, underground utilities, facilities, bldgs., Chaves Co. $80,000.

★**†New York** — IMPROVEMENTS — U. S. Eng., 120 Wall St., New York, indefinitely postponed imprvs., grading, planting, Queens Co. CD 9/4—ENR 9/10 under LB.

†Oklahoma—CLEARING, GRADING, etc.—U. S. Eng., 416 Wright Bldg., Tulsa, clearing, grading, drainage, paving, Ellis Co. $240,000. Plans deposit $20. CD 9/15—ENR 9/17.

★**†South Carolina**—IMPROVEMENTS—U. S. Eng., 33 Customhouse, Charleston, engineer-architect services by Lockwood-Greene Engineers, Inc., The Citadel, Spartanburg, imprvs. Over $1,000,000.

†Tenn., Clarksville — IMPROVEMENTS — Civil Aeronautics Admin., 14 St. between E St. and Constitution Ave. N.W., Wash., D. C., imprvs. $100,000-$500,000.

†Tenn., Memphis—IMPROVEMENTS — Civil Aeronautics Admin., 14 St. between E St. and Constitution Ave. N.W., Wash., D. C., imprvs. $100,000-$500,000.

†Tenn., Nashville—IMPROVEMENTS—Civil Aeronautics Admin., 14 St. between E St. and Constitution Ave. N.W., Wash., D. C., imprvs. $100,000-$500,000.

†Texas—COLD STORAGE SYSTEM—U. S. Eng., Fort Sam Houston, cold storage sys., incl. railroad siding, Spec. 42-519, Bexar Co. Plans deposit $25.

†Texas—FACILITIES—U. S. Eng., 231 W. Main St., Denison, facilities, Dallas Co. $250,000 authorized.

†Texas—UNDERGROUND UTILITIES, etc.—U. S. Eng., 231 W. Main St., Denison, underground utilities, bldgs., Wichita Co. $80,000 authorized.

†Tex., Beaumont—IMPROVEMENTS — City and Jefferson Co., imprvs. $480,000. CAA. Heartfield & Woodside, Amer. Natl. Bldg., archts.

†Tex., Brownsville—IMPROVEMENTS—City, imprvs. $200,000. CAA. W. O. Washington, Brownsville, engr.

★**†Tex., Brownwood** — IMPROVEMENTS — City and Brown Co., imprvs. $700,000. CAA.

★**†Tex., College Station**—IMPROVEMENTS—Town, imprvs. $640,100. CAA allotted funds.

Tex., Dallas—IMPROVEMENTS—Lou Foote Flying Service, 3214 Love Field, imprvs. Over $25,000.

★**†Tex., Denton** — IMPROVEMENTS — City, imprvs. $578,830. CAA.

★**†Tex., Gainesville** — IMPROVEMENTS — City and Cooke Co., imprvs. $900,000. CAA.

Tex., Galveston—IMPROVEMENTS—City, B. Harris, mayor, imprvs., expansion. $300,000. CAA.

†Tex., Midland—IMPROVEMENTS—City, M. C. Ulmer, mayor, imprvs. $467,000. CAA.

★**†Tex., Paris**—IMPROVEMENTS—Town and Lamar Co., imprvs. $900,000. CAA.

Tex., San Antonio—REMOVING PIPELINE CARRIER—Dunigan Tool & Supply Co., c/o Grayburg Oil Co., Smith-Young Tower, removing 15 mi. 8 in. pipeline carrier from Somerset Area to here. Over $25,000.

†Tex., Temple — IMPROVEMENTS — City, imprvs. $200,000. CAA.

★**†Tex., Uvalde** — IMPROVEMENTS — City, J. H. Ashby, mayor, and Uvalde Co., imprvs. $956,000. CAA allotted funds.

★**†Tex., Van Horn**—IMPROVEMENTS—City, imprvs. $600,000. CAA. CD 12/10—ENR 12/18.

†Washington—ELECTRICAL SYSTEM—U. S. Eng., 800 3 Ave., Seattle, electrical sys.

†Wash., Ellensburg — IMPROVEMENTS — Civil Aeronautics Admin., Boeing Field, Seattle, imprvs. $379,000.

†Wash., Ephrata—IMPROVEMENTS — Civil Aeronautics Admin., Boeing Field, Seattle, imprvs. $400,000.

BIDS ASKED

Bids Asked October 25

†Kansas — GASOLINE—FUELING SYSTEM—U. S. Eng., Albuquerque, N. M., gasoline fueling sys., Ford Co. CD 10/19—ENR 10/15.

Bids Asked October 29

California—TRAFFIC SIGNAL SYSTEMS—State Hy. Dpt., State Bldg., Los Angeles, traffic signal sys. intersections Rosecrans St. with Lytton St., Midway Dr. and Frontier St. and Mission Valley Rd. and Taylor St.; intersection Harbor Dr. with 32 and 28 Sts. and Pacific Hy., all in city and county of San Diego. C. H. Purcell, Pub. Wks. Bldg., Sacramento, engr.

Bids Asked

†New Mexico—RAILWAY LINES—U. S. Eng., Albuquerque, railway lines, McKinley Co. $70,000. Plans deposit $50.

†Texas—STORAGE SYSTEM—U. S. Eng., 25 St. and Avenue F, Galveston, storage sys. and facilities, McLennan Co.

†Texas—STORAGE SYSTEM—U. S. Eng., 25 St. and Avenue F, Galveston, storage sys. and facilities, Victoria Co.

Tex., Kilgore—PIPELINE CARRIER REMOVAL—American Liberty Pipe Line Co., Galena Park, Houston, removing 183 mi. 16 in. steel pipeline carrier between Kilgore area and Houston Ship Channel.

LOW BIDDERS

†Alabama—PLANTING, etc.—Pub. Building Admin., FWA, North Interior Bldg., Wash., D. C., Oct. 6, planting at housing project, Docket 1033, from Jack O. Holmes Landscaping, Inc., N. Neb. Ave. south of Apex St., Tampa, Fla., **(1) $39,240, (2) $36,240.** CD 9/25—ENR 10/1.

†California—ELECTRICAL DISTRIBUTION SYSTEM—U. S. Eng., 751 S. Figueroa St., Los Angeles, electrical distr. sys., No. 269, San Bernardino Co., from Dury Electric Co., 615 19 St., Bakersfield, less than **$500,000.**

†California—ELECTRICAL DISTRIBUTION SYSTEM—U. S. Eng., Wright Bldg., Sacramento, Oct. 8, electric distr. sys., Spec. 232, from K. F. Stolting, 1067 4 St., Santa Rosa, **$50,000-$100,000.**

†Idaho—IMPROVEMENTS—U. S. Eng., Pittock Blk. Portland, Ore., imprvs., Inv. 698-270, Power Co., from Vernon Bros., Orchard Ave., Boise, **$100,000-$500,000.**

†Kansas — IMPROVEMENTS — U. S. Eng., 416 Wright Bldg., Tulsa, Okla., ing, drainage, Lot 1, from M... Natl. Bank of Topeka Bldg., To... **$500,000;** imprvs., paving, Lot 2 from Constr. Co., 205 Old Colony ... Moines, Ia., **$100,000-$500,000,** both Pratt Co.

†Mississippi—FUELING SYS... Eng., U. S. Post Office & Court ... burg, fueling sys., Lauderdale Co., from Ansell Harper, Crowville, La. ... **$50,000.**

†Texas—AIR CONDITIONING SYSTEM—U. S. Eng., Fort Sam Houston, air conditioning sys., Spec. 42-402, Hays, Val Verde and Medina Counties, from Pines Eng. Co., 2413 N. Pearl St., Dallas, **$50,000-$100,000,** CD 9/22.

†Texas — ELECTRICAL DISTRIBUTION SYSTEM—U. S. Eng., Fort Sam Houston, Oct. 3, outside overhead electrical distr. sys., Spec. 42-356, Bell Co., from Taylor Constr. Co., Taylor, under **$50,000.**

†Texas — ELECTRICAL DISTRIBUTION SYSTEM—U. S. Eng., Fort Sam Houston, Sept. 26, outside overhead electrical distr. sys., Spec. 42-456, Bastrop Co., from R. E. McKee, 1918 Texas St., under $50,000. CD 9/23.

†Texas — ELECTRICAL DISTRIBUTION SYSTEM—U. S. Eng., 25 St. and Avenue F, Galveston, outside overhead electrical distr. sys., from Housing, Inc., 2407 Stanmore Dr., Houston, under **$50,000.** CD 10/5—ENR 10/1.

†Texas—IMPROVEMENTS—U. S. Eng., Fort Sam Houston, Oct. 3, imprvs. Spec. 42-401, from Brown & Root, Box 1139, Austin, **$100,000-$500,000.**

†Texas—UTILITY SYSTEMS—U. S. Eng., 25 St. and Avenue F, Galveston, utility sys., incl. natural gas, water and sanitary sewerage sys., from Housing, Inc., 2407 Stanmore Dr., Houston, **$50,000-$100,000.**

CONTRACTS AWARDED

†Alabama—HEATING—U. S. Eng., U. S. Courthouse & Customhouse, Mobile, heating for bldg., Inv. 569-43-190, Mobile Co. to Leff Eng. Co., 18 S. Water St., Mobile.

†Arkansas—IMPROVEMENTS—U. S. Eng., U. S. Post Office & Courthouse, Vicksburg, Miss., imprvs., Miller Co., to D. F. Jones Constr. Co., Southern National Bldg., Little Rock, **$100,000-$500,000.**

†California—FIRE PROTECTION SYSTEM—U. S. Eng., 74 New Montgomery St., San Francisco, fire and transport water distr. sys., to Henry Ernst & Sons, 551 Hayes St., San Francisco. Awarded 10/6. CD 9/28.

†California—HARDSTANDINGS—U. S. Eng., 74 New Montgomery St., San Francisco, hardstandings, to Macco Constr. Co., 815 Paramount Blvd., Clearwater. Awarded 10/6.

†California—IMPROVEMENTS—U. S. Eng., 74 New Montgomery St., San Francisco, imprvs., Santa Cruz Co., to Fredericksen & Westbrook 212 13 St., Sacramento, and D. McDonald, 204 23 St., Sacramento. Awarded 10/6.

†California — IMPROVEMENTS — Industrial Company, imprvs., to J. D. Proctor, 529 10 St. Federally financed.

†California—PAINTING—U. S. Eng., 74 New Montgomery St., San Francisco, camouflage painting, Contra Costa Co., to Foster & Kleiser Co., 1675 Eddy St., San Francisco. Awarded 10/5.

★**†Colo., Colorado Springs** — IMPROVEMENTS—U. S. Eng., 1709 Jackson St., Omaha, Neb., imprvs., to Geo. W. Condon Co., 208 Grain Exchange Bldg., Omaha, Neb., and Ed. H. Honnen Constr. Co., 208 W. Las Animas St., Colorado Springs and Peter Kiewit Sons Co., 1024 Omaha Natl. Bank Bldg., Omaha, Neb., over **$3,000,000.**

†Connecticut—ELECTRIC FACILITIES—U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., electric distr. sys., No. 699-43-84, New Haven Co., to Coken Co., 233 Richmond St., Providence, R. I. Est. under **$50,000.** CD 9/30—ENR 10/8.

†Florida — AIR CONDITIONING — U. S. Eng., Court House, Jacksonville, air conditioning bldgs., Sarasota Co., to Krauss Heating & Ventilating Co., St. Petersburg, under **$50,000.** Awarded 10/6.

†Florida—GAS FUELING SYSTEM—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, gas fueling sys., Inv. Neg-Jax-43-261, Palm Beach Co., to C. J. Keys, Federal Bldg., St. Petersburg, under **$50,000.** Awarded 9/29.

†Florida—GAS FUELING SYSTEM—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, A.C. gas fueling sys., Inv. Neg.-Jax 43-245, Hillsborough Co., to Aqua Systems, Inc., 385 Gerard Ave., New York, N. Y., under **$50,000.** Awarded 10/1.

†Florida — IMPROVEMENTS — U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, imprvs., paving, etc., Jackson Co., to Smith Contg. Co., Pensacola, under **$100,000.** Awarded 10/2.

†Florida — IMPROVEMENTS — U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, imprvs., Inv. Neg-Jax 43-281, Palm Beach Co., to Watt & Sinclair, Inc., 207 Royal

UNCLASSIFIED (Contracts Awarded, Cont'd.) Palm Way, Palm Beach. Est. under **$50,000.** Awarded 9/30.

★**†Florida**—IMPROVEMENTS—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, imprvs., Inv. Neg.-Jax-43-257, Duval Co., to Ebersbach Const. Co., Stovall Office Bldg., Tampa, under **$3,000,000.** Awarded 9/29.

†Florida — IMPROVEMENTS — U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, imprvs. Inv.-Neg-Jax-43-213, Highlands Co., to B. B. McCormick & Sons, Graham Bldg., Jacksonville, under **$500,000.** Awarded 9/29.

†Florida — IMPROVEMENTS — U. S. Eng., Court House, Jacksonville, imprvs., Inv. Neg. Jax 43-286, Polk Co., to J. E. Ballanger Constr. Co., Lakeland, under **$500,000.** Awarded 10/2.

†Florida — IMPROVEMENTS — U. S. Eng., Court House, Jacksonville, imprvs., Inv. Neg. Jax 43-280, Hillsborough Co., under **$500,000** ***electrical power sys., Inv. Neg. Jax 43-282, to Bigby Electric Co., 305 Franklin St., Tampa, under **$50,000** *** air conditioning bldgs., Inv. Neg. M.D. 43-6, to Auchors Appliances, Inc., Tampa, Fla., under **$50,000.**

†Florida — PAINTING — U. S. Eng., Court House, Jacksonville, painting bldgs., Inv. Neg. Jax 43-208, Lee Co., to MacNeil & Carr, Fort Myers, under **$50,000.** Awarded 9/26.

†Florida — PAINTING — U. S. Eng., Court House, Jacksonville, painting storage tanks, Inv. Neg. P.M. 43-5, Lee Co., to MacNeil & Carr, Fort Myers, under **$50,000.** Awarded 9/30.

†Florida — PLANTING — U. S. Eng., Court House, Jacksonville, planting shrubs, Inv. Neg. BA 43-5, Monroe Co., to Mangus Landscape Nursery, Goulds, Fla., under **$50,000.** Awarded 10/3.

†Florida—PLANTING TREES—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, furnishing, planting trees, Inv. Neg.-Neg.-B.A. 43-4, Monroe Co., to Mangus Landscape Nursery, Goulds, under **$50,000.** Awarded 10/1.

†Florida—RAILROAD SPUR TRACK—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, railroad spur track, Inv. Neg.-Jax. 43-236, Highlands Co., to B. B. McCormick & Son, Graham Bldg. and Okeechobee Const. Co., 518 Phelps St., both Jacksonville. Est. under **$500,000.** Awarded 9/29.

†Florida—SPRIGGING, etc.—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, sprigging, seeding, Bradford Co., Inv.-Neg-Jax-43-293, to Florida Nursery & Landscape Co., Leesburg, under **$50,000.** Awarded 10/1.

†Florida—TRAFFIC LIGHTS—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, traffic lights, Inv. Neg.-Jax 43-109, Lee Co., to Bigby Electric Co., 305 Franklin St., Tampa, under **$50,000.** Awarded 9/30.

†Georgia—ELECTRIC DISTRIBUTION SYSTEM—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, overhead electric distr. sys., addns. Inv. Neg. Jax-43-273, Thomas Co., to Brandon Electric Co., Deland, Fla., under **$50,000.** Awarded 9/28.

†Georgia — PAINTING — U. S. Eng., Court House, Jacksonville, painting bldgs., Inv. Neg. Jax 43-276, Lowndes Co., to Modern Painting Co., 804 Ocean St., Jacksonville, Fla., under **$50,000.** Awarded 10/7.

†Georgia—STORAGE SYSTEM—U. S. Eng., Post Office Bldg., Savannah, A. C. storage sys., Ware Co., to C. M. Guest & Son, Anderson, S. C.

★**†Indiana**—IMPROVEMENTS—U. S. Eng., 612 Federal Bldg., Louisville, Ky., imprvs. bldgs., etc., to Thompson Constr. Corp., 11 N. Pearl St., Albany, N. Y., and 1327 Lincoln Hotel, Indianapolis, Ind. Est. over **$1,000,000.** Awarded 10/5. CD 9/21—ENR 9/24.

†Ind., Evansville—IMPROVEMENTS—City, rebuilding and addn. imprvs., to Feigel Constr. Co., Evansville, **$375,000.** CAA. CD 5/28—ENR 6/4.

†Kansas — IMPROVEMENTS — U. S. Eng., Tulsa, Okla., imprvs., No. 957-Neg-43-61, to P. B. Odom Constr. Co., 3521 N.W. 10 St., Oklahoma City, Okla. Est. **$200,000.**

★**†Kan., Hays-Walker**—IMPROVEMENTS—U. S. Eng., 601 Davidson Bldg., Kansas City, Mo., imprvs., to W. L. Johnson Constr. Co., Hicksville, O., over **$2,000,000.**

★**†La., New Orleans**—FACILITIES—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., facilities, Supplementary Agreement 2, NOY 4501, to R. P. Farnsworth & Co., Inc., 212 Nashville Ave., P. O. Box 850, **$1,902,000.** Awarded 9/15. Additional to CD 4/22—ENR 4/30, under CA.

†Massachusetts — GROUND WORK — U. S. Eng., Park Sq. Bldg., Boston, landscaping, top grading, etc. Inv. 175-43-Neg 95, Plymouth Co., to Tree-Land, Inc., 889 Memorial Dr., Cambridge. Est. under **$50,000.** Bids 10/6. CD 10/1.

★**†Michigan**—TRANSMISSION LINE—U. S. Eng., 700 Union Guardian Bldg., Detroit, 2,400 volt transmission line, Macomb Co., to Detroit Edison Co., 2000 2 Ave., Detroit, less than **$1,000,000.**

†Mississippi—IMPROVEMENTS—U. S. Eng., U. S. Post Office & Court House, Vicksburg, imprvs., Sunflower Co., to Ziegler Constr. Co., Amer. Natl. Bank Bldg., Nashville, Tenn., **$100,000-$500,000.**

†Missouri — MOVING BUILDINGS, etc. — U. S. Eng., P. O. Box 97, Memphis, Tenn., moving and re-establishing bldgs., etc., Inv. 1092-43-58F, Dunklin and Pemiscot Counties, to S. C. Stephan, Caruthersville. Est. **$25,000-$50,000.**

★**†Neb., Grand Island**—IMPROVEMENTS—U. S. Eng., 1709 Jackson St., Omaha, imprvs., to E. H. Honnan, 218 W. Las Animas St., Colorado Springs, Colo., over **$2,000,000.**

★**†Neb., Kearney**—IMPROVEMENTS—U. S. Eng., 1709 Jackson St., Omaha, imprvs. to Peter Kiewit Sons Co., 1024 Omaha, Natl. Bank Bldg., Omaha, and Condon-Cunningham Co., 208 Grain Exchange Bldg., Omaha, over **$3,000,000;** cost plus fixed fee contract for construction to A. Guthrie & Son Inc., 141 E. 4 St., St. Paul, Minn.

†New Jersey — FACILITIES — U. S. Eng., 120 Wall St., New York, N. Y., addnl. facilities, Middlesex Co., to Schaedel & Bros. Co., Inc., 130 Bruce St., Newark. **$50,000-$100,000.**

New Jersey—IMPROVEMENTS—Industrial Company, imprvs., to Lake States Eng. Co., 111 W. Jackson St., Chicago, Ill., **$130,000.** P. F. Getz, 1634 N. 6 St., Phila., Pa., archt.

†New Mexico — IMPROVEMENTS — U. S. Eng., Albuquerque, imprvs. construction, grading, asphalt and concrete paving, Luna Co., to Brown Bros., Albuquerque. **$100,000-$500,000.** CD 9/27—ENR 9/24.

North Carolina — TRANSMISSION LINE — Jones-Onslow Electric Membership Corp., Jacksonville, 100 k.v. transmission line, Onslow Co., to R. H. Bouligny, Inc., 433 W. Morehead St., Charlotte. Gibbs & Hill, Penn. Station, New York, N. Y., engrs.

†Ohio — GRADING — U. S. Eng., Wright Field, Dayton, grading, Greene Co., to N. Cenci, 1183 Essex St., Columbus, over **$100,000.** Bids 9/23.

†Oklahoma—ELECTRICAL DISTRIBUTION—U. S. Eng., 416 Wright Bldg., Tulsa, outside overhead electrical distr. sys., Muskogee Co., to Stovall Constr. Co., Texas Bank Bldg., Dallas, under **$50,000.** CD 9/4—ENR 9/10, under Sewers.

†Oklahoma—GRADING, etc.—U. S. Eng., 416 Wright Bldg., Tulsa, grading, surfacing, Tulsa Co., to Carl Frix, Sallisaw, **$100,000-$500,000.** Awarded 10/6. CD 9/14—ENR 9/17.

†Oklahoma — IMPROVEMNTS — U. S. Eng., 416 Wright Bldg., Tulsa, imprvs., grading, drainage, asphalt and concrete paving No. 957-neg-43-58, Muskogee Co., to Koss Constr. Co., Old Colony Bldg., Des Moines, Ia. **$100,000-$500,000.** CD 9/4—ENR 9/10, under Sewers.

†Oklahoma—IMPROVEMENTS—U. S. Eng., 416 Wright Bldg., Tulsa, imprvs., frame bldgs., Oklahoma Co., to J. H. Putney, 221 NW. 22 St., Oklahoma City. Est. under **$100,000.**

†Oregon—RAILWAY—U. S. Eng., Pittock Blk., Portland, railway construction, Multnomah Co., to Gregoire & Van Horn, 6735 Sacramento St., Portland, **$50,000-$100,000.**

†Oregon—WHARF—U. S. Eng., Pittock Blk., Portland, wharf, Clatsop Co., to Gilpin Constr. Co., Henry Bldg., Portland, under **$50,000.**

†South Carolina — IMPROVEMENTS — U. S. Eng., Walterboro, imprvs., bldgs. addns., Colleton Co., to H-S, B & F-J Co., Swannonoa, N. C. Bids 10/3. CD 9/29.

S. D. Yankton—RADIO TOWER—WNAX Broadcasting Station, Yankton, radio tower, footings to Naugle-Leck, Inc., 522 Roanoke Bldg., Minneapolis, Minn.***erecting tower, to Beasely Const. Co., Shawnee, Okla.***steel, to Truscon Steel Co., 1315 Albert St. Exten., Youngstown, O. Est. **$100,000.**

†Tennessee — ELECTRIC DISTRIBUTION, etc.—U. S. Eng., P. O. Box 97, Memphis, electric distr. sys. and substation, No. 1092-43-94F, Lauderdale Co. to Electric Constr. Co., 317 Main St., Little Rock, Ark., under **$50,000.** Bids 10/5. CD 9/29.

†Tennessee—IMPROVEMENTS—U. S. Eng., P. O. Box 97, Memphis, imprvs., No. 1092-43-86F, Dyer Co., to A. F. Roedding, Jr., Painting Co., 5625 Wabada St., St. Louis, Mo., under **$50,000.**

†Tennessee—SEEDING—U. S. Eng., P. O. Box 97, Memphis, seeding 35 acres at CAA airport, No. 1092-43-86 F. Dyer Co., to A. R. Shelly, Dyersburg, under **$50,000.**

†Texas—AIR CONDITIONING SYSTEM—U. S. Eng., Fort Sam Houston, summer-winter air conditioning sys., electric wiring, Spec. 42-271, Val Verde Co., to Harris & Beeman, Inc., 509 E. 3 St., Fort Worth, under **$50,000.**

†Texas — CLEARING, etc — U. S. Eng., Fort Sam Houston, clearing, grubbing, to E. Lloyd, Brownwood, under **$50,000.** Awarded 10/8.

†Texas—ELECTRICAL DISTRIBUTION—U. S. Eng., 231 W. Main St., Denison, electrical distr. sys., Solic. 257-43-76, Gray Co., to Frank A. Goll Co., Grapevine, under **$50,000.**

†Texas—ELECTRICAL DISTRIBUTION—U. S. Eng., Fort Sam Houston, electrical distr. sys. Spec. 42-284, Taylor Co., to Taylor Constr. Co., Taylor, under **$50,000.** Bids about 9/29. CD 9/23.

†Texas—ELECTRICAL DISTRIBUTION—U. S. Eng., Fort Sam Houston, outside overhead electrical distr. sys., Spec. 42-285, to H. B. Zachry, Builders Exch., San Antonio under $50,000. CD 9/21.

†Texas—GASOLINE STORAGE—U. S. Eng., Fort Sam Houston, a.c. gasoline storage and dispensing station, steel tanks, etc., Spec. 42-286, Taylor Co., to McClung & Stanley, 4206 Birchman St., Dallas, **$50,000-$100,000.** Bids about 9/30. CD 9/24, under Public Bldgs.

†Texas—HEATING—U. S. Eng., Fort Sam Houston, heating, Spec. 42-423, Dexar Co., to Tarrillion Bros., 223 Barrera St., San Antonio, under **$50,000.** Bids 9/22. CD 9/16.

†Texas—IMPROVEMENTS, etc.—U. S. Eng., 25 St. and Avenue F, Galveston, imprvs., clearing, grading, fencing, storm sewers, etc., to H. Page, Norwood Bldg., Austin, **$50,000-$100,000.**

†Texas—RAILROADS—U. S. Eng., Fort Sam Houston, railroads, Spec. 42-416, T2-17, Brown Co., to Martin & Grace, 711 Rio Grande Life Bldg., Dallas, over **$50,000.** Bids 9/30. CD 9/24.

★**†Tex., Fort Worth** — IMPROVEMENTS — Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., imprvs., NOY 5637, to Central Contracting Co., Nolan Bros., Inc., and C. A. Wagner Constr. Co., 406 Construction Bldg., Dallas, **$4,740,500.** Awarded 9/12. CD 8/16—ENR 8/13.

†Utah—IMPROVEMENTS—U. S. Eng., 32 Exchange Pl., Salt Lake City, imprvs., to Johnson-Deck, Eccles Bldg., Ogden, under **$500,000.**

★**†Va., St. Juliens Creek**—IMPROVEMENTS—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., imprvs., Supplementary Agreement 1, NOY 4547, to R. R. Richardson & Co., Inc., C. J. Lindemann and Tunstall Johnson Co., Inc., Citizens Bank Bldg., Norfolk, **$1,363,400.** Awarded 9/9.

†Washington—FIRE ALARM SYSTEM—U. S. Eng., 800 3 Ave., Seattle, fire alarm sys., King Co., to American District Telegraph Co. of Washington, 216 Douglas Bldg., Seattle, under **$50,000.** CD 9/28—ENR 10/1.

†Wyoming—IMPROVEMENTS—U. S. Eng., c/o Postmaster, Denver, Colo., imprvs., water, sewer, electric sys., Ford Co., to P & E Constr. Co., Lamar, Colo. Est. under **$500,000.**

★**B. C., Comox**—CLEARING, GRADING etc.—Dpt. Transport, Ottawa, Ont., clearing, grading, draining, etc., to General Constr. Co., Ltd. Granville Island, Vancouver, about **$2,200,000,** cost plus.

B. C., Dog Creek—CLEARING, etc.—Dpt. Transport, Ottawa, Ont., clearing, stripping, grading, rolling, etc., to Fred Mannix & Co., Ltd., Calgary. Est. **$285,000.** CD 8/19—ENR 8/27.

B. C., Esquimalt—DRY DOCK—Dominion Govt., Ottawa, Ont., dry dock, to Knott & Jones, 1327 Pandora St., Victoria, **$98,746.** Est. $100,000. Bids 9/8. CD 8/26—ENR 9/3.

B. C., Port Alberni—WHARF—Dpt. P. Wks., Ottawa, Ont., repairing assembly wharf, to Wm. Greenlees, 500 Beatty St., Vancouver, **$47,612.** CD 8/5—ENR 8/13.

Sask., Regina—IMPROVEMENTS—Dpt. National Defense for Air, Ottawa, Ont., imprvs., to Poole Constr. Co. Ltd., Hamiotn and 8 Aves., about **$100,000.** Bids 10/6. CD 9/30.

Yukon Territory, Snag — IMPROVEMENTS—Dpt. Transport, Ottawa, Ont., imprvs., radio range bldg., transmitter bldg., power house, etc., to Bennett & White Constr. Co., Ltd., 510 W. Hastings St., Vancouver, B. C., about **$125,000;** stripping radio range station, etc., near here, to British Yukon Navigation Co. Ltd., Vancouver, B. C., about **$260,000.**

LATIN AMERICA

PROPOSED WORK

Mexico — Mexican Government, Palacio Nacional, Mexico, D. F., plans expansion, imprv. water and drainage services, street paving, 525 bed general hospital, drydock to accommodate craft of up to 15,000 tons, hy. to circumvate city, **Vera Cruz**, Vera Cruz state, $5,000,000, President Manuel Avila Camacho, approved all plans.

PUBLIC BUILDINGS

PROPOSED WORK

†Alabama — Coosa River Valley Housing Auth., Sylacauga, demountable frame houses, Ala. 1078, for NHA. Chas. McCauley, Jackson Bldg., Birmingham, archt. CD 7/28—ENR 7/30.

†Arkansas—Pub. Housing Auth., NHA. Electric Bldg., Fort Worth, Tex., dormitory apartments, Ark. 3081.

★**†Arkansas**—Pub. Housing Auth., NHA. Electric Bldg., Fort Worth, Tex., war housing.

PUBLIC BLDGS. (Proposed Work, Cont'd.)

†California—U. S. Dpt. Agriculture Emergency Rubber Project, 523 S. Main St., Calinas, plans by C. E. Butner, 7 Winham St., Salinas, row shelters, showers, community center and administration bldgs., San Diego Co. Over $150,000.

†California—U. S. Eng., 1209 8 St., Sacramento, engineer-architect services by Huber & Knapik, civil engrs., 1 Montgomery St., San Francisco, construction, Sacramento Co.

†California—Housing Auth. Marin County, Cheda Bldg., San Rafael, housing, for NHA.

†California—Housing Auth. Marin County, Cheda Bldg., San Rafael, plans by C. F. Gromme, Albert Bldg., San Rafael and C. T. Kett, 508 Throckmorten Ave., Mill Valley, cafeteria bldg., for NHA.

Calif., Marysville—Yuba Co., Courthouse, plans by D. D. Stone and L. B. Mulloy, Associate, 381 Bust St., San Francisco, hospital addn. $239,500.

†Calif., Salinas—Salinas Community Hospital Assn., Salinas, plans by C. E. Butner, 7 Winham St., 1 story frame community hospital, Romie Lane. $325,000. **FWA.**

†Conn., Norwalk—Norwalk General Hospital, R. N. Brough, supt., plans by Visscher & Burley, 51 E. 42 St., New York, N. Y., 4 story, brick, steel maternity hospital. $350,000. **FWA.**

†Florida—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Atlanta, Ga., dormitory apartments, Proj. Fla. 8086.

†Florida—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Atlanta, Ga., dormitories, Proj. Fla. 8152; permanent apartment housing, Proj. Fla. 8154.

†Fla., Port St. Joe—Federal Works Agency, Candler Bldg., Altanta, Ga., hospital. $50,000.

†Georgia—Federal Works Agency, 20 5 St. N.W., Atlanta, bids soon recreational bldg. $47,000.

†Georgia—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Atlanta, dormitory apartments, Proj. Ga. 9112; and dwelling units, Proj. Ga. 9114.

†Ga., Warmer Robins—Federal Works Agency, Candler Bldg., Atlanta, bids soon recreation bldg. $105,000.

†Illinois—U. S. Eng., Court House, St. Louis, Mo., bldgs., etc., St. Clair Co.

★**†Indiana**—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago, Ill., plans by Miller & Yaeger, 200 Opera House Bldg., Terre Haute, row houses. Over $500,000.

★**†Indiana**—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago, Ill., plans by Miller & Yaeger, 200 Opera House Bldg., Terre Haute, row houses. Over $500,000.

†Kansas—Pub. Housing Auth., NHA, Dierks Bldg., Kansas City, Mo., administration, maintenance bldgs., site imprv., sewage disposal plant, electrical dist. sys. sewer, water, gas sys.

†Kansas—U. S. Eng., Wright Bldg., Tulsa, Okla., plans bldgs. $100,000.

†Kentucky—U. S. Eng., Federal Bldg., Louisville, plants. $200,000.

†Ky., Henderson—Federal Works Agency, 330 W. Bway., Louisville, hospital. $350,000.

†Ky., Hopkinsville—Pub. Bldgs. Admin., North Interior Bldg., Wash., D. C., rejected bids Sept. 24, health center bldg. CD 9/10—ENR 9/17.

Ky., Lexington—State Dpt. Welfare, Frankfort, plans by H. Meriwether and J. T. Gillig, 234 E. Short St., rehabilitating Ward Bldg. 2, also repairing, painting other bldgs. $275,000.

Ky., Louisville—City General Hospital, plans by Colley & Hartstern, Realty Bldg., 2 story general hospital. $150,000.

†Michigan—Air Reduction Corp., Flint, bldgs. $250,000. Defense Plant Corp. will finance.

†Mississippi—U. S. Housing Auth., F St. between 18 and 19 St. N.W., Wash., D. C., dwelling units, Miss. 22121; dormitory units, Miss. 22122.

†Missouri—U. S. Eng., 10 E. 17 St., Kansas City, Mo., machine shop, Buchanan Co. Under $200,000.

†New Jersey—Federal Works Agency, 2 Lafayette St., New York, N. Y., 1 story recreation center bldg., Middlesex Co. $55,500.

†New Jersey—U. S. Eng., 6 and Walnut Sts., Phila., Pa., architect-engineering services by Parsons, Klapp, Brinkerhoff & Douglas, 142 Maiden Lane, New York, N. Y., addnl. facilities.

†N. Y., Buffalo—Deaconess Hospital, 563 Riley St., plans by F. J. and W. A. Kidd, 524 Franklin St., hospital addn. $486,000. **FWA.** CD 9/30—ENR 6/18.

†N. Y., Niagara Falls—Niagara Falls Memorial Hospital, Inc., Niagara Falls, plans by W. A. Cannon, Niagara Falls, 2 story, bsmnt., brick hospital. $314,000.

★**†North Carolina**—U. S. Eng., Durham, exten. existing facilities, enlarging bldg., Granville, Person, and Durham Counties. $1,976,199.

†North Carolina—Federal Works Agency, 606 State Planters Bank Bldg., Richmond, Va., Bids soon recreation center, Mecklenburg Co. $10,925. W. H. Hook, Commercial Bank Bldg., Charlotte, engr.

†N. C., Elizabeth City—Albemarle Hospital, plans by R. Fusen, New Bern, Albermarle hospital addn., N.C. 31-209. $150,000. **FWA.** CD 10/8.

†Oklahoma—U. S. Eng., 231 W. Main St., Denison, Tex., bldgs., underground utilities, facilities, Carter Co. $75,000 authorized.

†Okla., Muskogee—R. Tucker, city mgr., plans by J. J. Haralson, 606 Manhattan Bldg., hospital addn., Okla. 34-160. $165,330. **FWA.**

†Pennsylvania—U. S. Eng., 925 New Federal Bldg., Pittsburgh, plans by Hunting, Davis & Dunnells, 1150 Century Bldg., Pittsburgh, altering bldgs. Butler Co.

★**†Pa., Phoenixville**—U. S. Eng., 6 and Walnut Sts., Phila., expanding Valley Forge General Hospital. $1,500,000.

★**†South Carolina**—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Atlanta, Ga., dormitories.

†South Dakota—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., D. C., hospital, offices.

†Tennessee—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Atlanta, Ga., dormitory apartments, Tenn. 40052, and permanent housing, Tenn. 40053.

†Tennessee—U. S. Eng., 306 U. S. Courthouse, Nashville, bldgs.

†Texas—U. S. Eng., Fort Sam Houston, bids soon physiotherapy bldg., incl., asphalt walk, service connections, etc., Spec. 42-491, Bexar Co. Plans deposit $25.

†Texas—U. S. Eng., 231 W. Main St., Denison, addnl. construction, Wichita Co. $225,000 authorized.

†Texas—U. S. Eng., Amarillo, rejected bids frame dwellings, Moore Co. CD 9/14—ENR 9/17.

†Texas—U. S. Eng., 231 W. Main St., Denison, housing facilities, Gray Co.

†Texas—U. S. Eng., 231 W. Main St., Denison, engineer-architect services by S. Simons, Tyler, bldgs., facilities, Smith Co.

†Tex., Corpus Christi—City, A. C. McCaughan, mayor, plans by Hamon & Co., 913 Jones St., isolation hospital plant, underground utilities, electric sys., etc., Tex. 41-281. $60,000. **FWA.** CD 10/1—ENR 10/8.

†Tex., Fort Worth—Bd. Educ., Fort Worth, rejected bids Sept. 16, mechanical vocational school bldg. and shop, Tex. 41-500. $65,500. **FWA.** W. G. Clarkson & Co., 610 1st Natl. Bank Bldg., archts. CD 7/30.

★**†Utah, Brigham City**—U. S. Eng., 32 Exchange Pl., Salt Lake City, expanding Bushnell General Hospital. $1,500,000.

★**†Wash., Renton**—Federal Works Agency, Alaska Bldg., Seattle, plans by G. W. Stoddard, Orpheum Bldg., Seattle, 1 story, frame hospital. $500,000. CD 8/26—ENR 9/3.

†W. Va., Morgantown—Monongalia Co. Court, public health center, near here. $30,000 allot. approved. **FWA.**

★**†W. Va., White Sulphur Springs**—U. S. Eng., Chesapeake & Ohio Bldg., Huntington, altering Greenbrier Hotel into army general hospital.

†Wisconsin—U. S. Eng., Camp Douglas, new bldgs. or reconditioning existing bldgs., Juneau Co.

†Wisconsin—A. O. Smith Corp., 3533 N. 27 St., Milwaukee, plans by Siesel Const. Co., 514 E. Ogden Ave., Milwaukee, addnl. stories on bldg. Defense Plant Corp. will finance.

†Pacific Northwest—U. S. Eng., 810 3 Ave., Seattle, Wash., bldg.

†Pacific Northwest—U. S. Eng., 810 3 Ave., Seattle, Wash., repair shop, officer's quarters, drilling well.

Man., Winnipeg—Wartime Housing Ltd., 55 York St., Toronto, Ont., brick on concrete dwellings. $350,000.

Ont., Hamilton—Wartime Housing Ltd., 55 York St., plans by Hutton & Souter, Pigott Bldg., brick on concrete single dwellings. $400,000. CD 8/26—ENR 9/3.

Ont., Hamilton—Hospital Governors, W. H. Cooper, chn., Barton St. E., plans by McDonnell & Lenz, 42 James St. N., alterations, addns. $150,000. By law to be presented in January.

Ont., Renfrew—Secretary Dpt. P. Wks., Ottawa, bids soon naval bldg. for production material for mines and geology branch, for Dpt. Mines & Resources, Ottawa. $50,000.

Que., Amos—Corporation du Sanatorium d'Amos, Inc., sanatorium.

★**Que., Cartierville**—Wartime Housing, Ltd., 55 York St., Toronto, Ont., bids soon 350-400 houses. $1,250,000.

Que., St. Hyacinthe—Dominion Govt., Ottawa, Ont., barracks, other accommodations for Naval Training Centre. $150,000. Dpt. Naval Affairs, archts., and Dpt. Munitions & Supply, engrs., both Ottawa, Ont.

Sask., Estevan—Wartime [illegible] York St., Toronto, Ont., s[illegible] ings. $150,000.

Sask., Sturdee—Dominio[illegible] Ont., plans by Dpt. Air Def[illegible] Ottawa, Ont. operational school bldgs[illegible] Munitions & Supply, Ottawa[illegible]

Sask., Weyburn—Wartim[illegible] 55 York St., Toronto, On[illegible] dwellings. $150,000.

Sask., Yorkton—Wartime [illegible] York St., Toronto, Ont., s[illegible] ings. $150,000.

BIDS ASKED

Bids Asked October 19

†N. Y., Buffalo—Public Hous[illegible] Auth., NHA, 270 Bway., New York, 306 [illegible] permanent housing, N. Y. 2-4. F. C. Ba[illegible] 250 Delaware Ave., archt. CD 10/1—ENR 10/8.

†Pa., Harrisburg—Pub. Housing Auth., NHA, 270 Bway., New York, N. Y., [illegible] unit permanent housing, Pa. 36085. W. L. Murray, 216 N. 2 St., archt. CD 9/1—ENR 9/3.

Bids Asked October 20

†Pennsylvania—Pub. Housing Auth., NHA, 270 Bway., New York, N. Y., housing, Pa. 36264, Delaware Co. Gleason & Mulrooney, 1612 Market St., Phila., archts. CD 10/5—ENR 10/8.

Bids Asked October 22

★**†Connecticut**—Bridgeport Housing Auth., 252 Hallett St., Bridgeport, Success Park Housing, Conn. 6055, for NHA. $1,300,000. Plans deposit $50 first set, $10 addnl. sets. Harry Lindsay, 211 State St., Bridgeport, Conn., archt. CD 9/1—ENR 9/3.

†Pennsylvania—Pub. Housing Auth., NHA, 270 Bway., New York, N. Y., temporary housing, Pa. 36258. Extended date. CD 9/16—ENR 9/24.

Bids Asked October 23

Missouri—Pub. Housing Auth., NHA, Dierks Bldg., Kansas City, Mo., erecting demountable prefabricated war housing units, etc. P. M. O'Meara & Associates, 5709 Waterman Ave., St. Louis, Mo., archts. CD 7/6—ENR 7/9 under Unclassified, LB.

Bids Asked October 26

†Pennsylvania—Chester Housing Auth., Community Bldg., Lamokin Village, Chester, housing, Proj. 36265, Delaware Co., for NHA. Extended Date. CD 9/21—ENR 9/24.

★**†Pa., Phila.**—Pub. Housing Auth., NHA, 270 Bway., New York, N. Y., 300 unit demountable housing, Pa. 36254. Extended date. Demechlor & Superwitz, 220 S. 16 St., archts. CD 8/31—ENR 9/3.

Bids Asked October 27

★**†Wash., Renton**—Renton Housing Auth., Renton, 1,000 unit dormitory apartments, Wash.-45136; 200 unit dormitories, Wash. 45137, for NHA. CD 10/5—ENR 10/8.

Bids Asked October 29

★**†Wash., Kirkland**—King County Housing Auth., County-City Bldg., Seattle, 500 unit permanent housing, Wash.-45161; 600 unit dormitory apartments, Wash.-45138; 200 unit dormitories, Wash.-45139, for NHA. CD 10/6—ENR 10/8.

Bids Asked October 30

★**†Ark., Hot Springs**—Pub. Housing Auth., NHA, Electric Bldg., Fort Worth, Tex., 258 unit permanent housing, Ark.-3062 and 50 unit dormitory apartments, Ark.-3063, both at Jones Mill site. CD 10/9.

†California — Bureau Reclamation, Denver, Colo., four 30 in. sphere valves, for station-service penstocks, Shasta Power Plant, Kennett Div., Central Valley Project, Spec. 1042, H. W. Bashore, acting comr.; adv. ENR 10/15. CD 10/12 under PW—ENR 10/8 under BA.

Bids Asked November 2

†D. C., Wash.—Pub. Housing Auth., NHA, Longfellow Bldg., Connecticut and Rhode Island Aves., N.W., 64 unit permanent housing DC-1-12. L. Justement, 1223 Connecticut Ave., archt. CD 7/17—ENR 7/23.

Bids Asked About November 3

†N. C., Jacksonville—Federal Works Agency, 606 State Planters Bldg., Richmond, Va., hospital, health center, and nurses home. $307,700. J. J. Rowland, Kingston, archt. CD 12/23—ENR 1/1

†Pa., Coatesville—Pub. Housing Auth., NHA, 270 Bway., New York, N. Y., 200 unit permanent housing, Pa. 36272, and 50 unit housing Pa. 36273. Stonerov & Kahn, 616 Bulletin Bldg., Phila., archts. CD 10/5—ENR 10/8.

Bids Asked November 6

†Ark., Stuttgart—Pub. Housing Auth., NHA, Electric Bldg., Fort Worth, Tex., 100 unit dormitory apartments, Ark. 3081. CD 10/9.

★**†D. C., Wash.**—Pub. Housing Auth., NHA, Longfellow Bldg., Connecticut and Rhode Island Aves., N.W., 302 unit permanent housing, DC-1-6, Geo. Howe & Associates, and L. L. Kahn, 917 15 St. NW., archts. CD 7/17—ENR 7/23.

†Massachusetts—U. S. Eng., Park Sq. Bldg., Boston, (from selected bidders) temporary frame bldgs., No. 175-43-Neg. 107, Suffolk Co.

PUBLIC BLDGS (Bids Asked, Cont'd.)

†**Oklahoma**—U. S. Eng., 416 Wright Bldg., Tulsa. Contr. 2, bldgs., underground utilities, asphalt surfacing streets and roads, outside electric distr. sys., $400,000, plans deposit $55; Contr. 1, shaping streets and roads, and gravel base course over $25,000, plans deposit $20; boundary fencing, over $25,000, all in Kay Co.

†**Pennsylvania**—Allegheny Housing Auth., F. L. Palmer, exec. dir., County Office Bldg., Pittsburgh, housing, Project Pa. 36105 for NHA, $400,000. P. T. Farrell, 309 4 Ave., Pittsburgh, archt. E. S. Tower, 213 Investment Bldg., Pittsburgh, engr. Extended date. CD 9/25—ENR 10/1.

★†**Texas**—American Republics Petroleum Co., Petroleum Bldg., Houston, altering refinery plant, $2,000,000 or more; constructing new unit, remodeling existing plant, $1,500,000. Federally financed. CD 9/9 and 9/10—ENR 9/17.

LOW BIDDERS

†**Alabama**—U. S. Eng., U. S. Courthouse & Customhouse, Mobile, finance bldg., Inv. 569-43-176, Mobile Co., from Andrew & Dawson Co., Bartlett Bldg., Montgomery.

†**California**—U. S. Eng., 1209 8 St., Sacramento, Oct. 3, bldgs., Inv. 206, from Harris Constr. Co., P. O. Box 109, Fresno, $100,000-$500,000; utilities, sewage disposal sys., Spec. 219 from D. W. Nicholson, 1701 San Leandro Blvd., San Leandro, $100,000-$500,000, both Sacramento Co.

★†**Indiana**—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago, Ill., Oct. 1, brick dwelling units, from Bank Building & Equipment Corp. of America, 909 Sidney St., St. Louis, Mo., $1,031,000. CD 6/26.

†**Louisiana**—U. S. Eng., foot of Prytania St., New Orleans, addnl. bldgs., from R. J. Jones, 918 Main St., Pineville.

★†**Ohio**—Lorain Metropolitan Housing Auth., Lorain, housing, for NHA, from Weinstein Constr. Co., 573 E. Talmadge St., Akron, $897,-700. CD 10/5—ENR 10/8.

Tenn., Nashville—Bd. Educ., about Oct. 1, rebuilding 2 story, bsmnt. Warner School, incl. electrical work, from J. B. Regen, 127 5 Ave. N. Est. $100,000-$150,000. CD 9/10—ENR 9/17.

†**Texas**—U. S. Eng., Fort Sam Houston, bldgs., facilities, Spec. 42-502, Bastrop Co., from C. L Browning, Jr., 812 Insurance Bldg., San Antonio. CD 10/5—ENR 10/8.

†**Texas**—U. S. Eng., Fort Sam Houston, Sept. 30, bldgs., Spec. 42-354, Bell Co., from S. R. Franck, Wooten Hotel, Abilene, $100,000-$500,000. CD 9/24.

†**Texas**—U. S. Eng., 25 St. and Avenue F, Galveston, 1 and 2 story frame bldgs., from Housing, Inc., 2407 Stanmore Dr., Houston. $100,000-$500,000. CD 10/2—ENR 10/8.

†**Texas**—U. S. Eng., 231 W. Main St., Denison, bldgs., Solic. 257-43-80, Bowie Co., from United Constr. Co., Burt Bldg., Dallas, $100,-000-$500,000.

CONTRACTS AWARDED

†**Alabama**—U. S. Eng., U. S. Courthouse & Customhouse, Mobile, addnl. housing bldgs., sewers, drains, Inv. 569-43-135, Dale Co., to Henderson, Black & Greene, Troy. CD 8/3—ENR 8/8.

★†**Alabama**—U. S. Eng., U. S. Courthouse & Customhouse, Mobile, housing Mobile Co., to Paul Smith Constr. Co., 310 N. Rome Ave., Tampa, Fla. Est. $500,000.

★†**Alabama**—U. S. Eng., U. S. Courthouse & Customhouse, Mobile, bldgs., Pickens Co. to Algernon Blair Co., 1st Natl. Bank Bldg., Montgomery. Est. $5,000,000. CD 10/5—ENR 10/8.

†**Alabama**—U. S. Eng., 494 Spring St. N.W., Atlanta, Ga., bldgs., Calhoun Co., to Dethlefs-Boozer Constr. Co., Anniston.

†**Alabama**—U. S. Eng., Court House, Mobile, housing, Mobile Co., to Paul Smith Co., 320 Rome Ave., Tampa, Fla., less than $400,000.

★†**Alabama**—U. S. Eng., Court House, Mobile, housing, hospital, Houston Co., to Henderson, Black & Green, Troy, less than $1,500,000.

†**Arkansas**—U. S. Eng., 300 Bway., Little Rock, bldgs., utilities, to Geo. Senne & Co., 510 E. 15 St., Topeka, Kan. Awarded 9/30.

★†**California**—Industrial Company, dormitory units for single men and war apartments, Alameda Co., to Barrett & Hilp, 918 Harrison St., San Francisco. Est. $2,875,000. U. S. Maritime Comn. will finance. CD. 9/22—ENR 9/24.

†**California**—U. S. Eng., 74 New Montgomery St., San Francisco, housing, Alameda Co., to Lewis Constr. Co., 354 Hobart St., Oakland; electrical work, to Rosendin Motor Wks., 1070 Park Ave., San Jose.

★†**California**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O., $1,400,000 incl. equip.

†**California**—Dpt. Agriculture, 523 S. Main St., Salinas, shops, Monterey Co., to G. Petersen, 1841 Bancroft Ave., San Leandro, under $100,000. Bids 10/8.

†**California**—U. S. Eng., 74 New Montgomery St. San Francisco, bldg., San Francisco and Marin Counties, to B. Liebman, 3219 Fillmore St., San Francisco. Awarded 10/8.

†**Connecticut**—Pub. Housing Auth., NHA, 24 School St., demountable frame units, to Holt Fairchild Co., 7 Court St., Arlington, Mass. Est. $360,000. CD 10/1—ENR 10/8.

†**Connecticut**—U. S. Eng., Industrial Trust Bldg., Providence, R. I., bldg. utilities, New London Co., to Fusco-Amatruda Co., 59 Amity Rd., New Haven; electrical work, to Pucci Electric Shop, 34 Canal St., Westerly, R. I. Est. $85,000.

†**D. C., Wash.**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., diving school, NOY 5741, to Parkhill Constr. Co., Chandler Bldg., $250,000. Awarded 10/10.

†**D. C., Wash.**—Defense Plant Corp., 811 Vermont Ave. N.W., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est $70,000 incl. equip.

†**Florida**—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, modification hotel, Inv.-Neg-Jax-43-267, Pinellas Co., to R. E. Clarkson, Inc., Power & Light Bldg., St. Petersburg, under $500,000. Awarded 10/1.

†**Florida**—U. S. Eng., U. S. Courthouse & Post Office, Jacksonville, bldgs., etc., Inv.-Neg.-Jax- 43-263, Polk Co., to J. D. Ewell, Lakeland, under $500,000. Awarded 10/1.

†**Georgia**—U. S. Eng., 494 Spring St., Atlanta, bldg., Catoosa Co., to John Parks Constr. Co., Hamilton Natl. Bank Bldg., Chattanooga, Tenn.

†**Georgia**—U. S. Eng., Marietta, boiler plant, Cobb Co., to A. Farnell Blair, 215 Church St., Decatur. Bids 10/2. CD 9/29.

†**Georgia**—U. S. Eng., Post Office Bldg., Savannah, warehouse, Richmond Co., to Tri-State Constr. Co., 114 Ellis St., N.E., Atlanta.

★†**Illinois**—Defense Plant Corp., 811 Vermont Ave., N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. $2,000,000 incl. equip. CD 7/14—ENR 7/16.

†**Indiana**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg. addn., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. $130,000 incl. equip. Metal & Thermit Co. lessee.

★†**Louisiana**—Pub. Housing Auth., NHA, Electric Bldg., 7 and Taylor Sts., Fort Worth, Tex., housing, Projects La. 23-1 and La. 23-2, to A. A. Gremillion Co., Alexandria. $561,000. CD 10/12.

†**Louisiana**—U. S. Eng., foot of Prytania St., New Orleans, building facilities, to Port City Constr. Co., Lake Charles. Awarded 10/1.

†**Maryland**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg. addn., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est. $100,000. Standard Metal Refining Co., lessee.

★†**Md., Baltimore** — Baltimore Housing Auth., 709 E. Eager St., Baltimore, general contract 3 story, 418 unit permanent dwellings and community bldg., Md-2-10, for NHA, to Campton Constr. Corp., 420 Lexington Ave., New York, N. Y., $1,756,000. CD 7/17—ENR 7/23, under LB.

†**Massachusetts**—Defense Plant Corp., 811 Vermont Ave., N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est. $70,000 incl. equip.

†**Massachusetts**—U. S. Eng., Park Sq. Bldg., Boston, plumbing, various bldgs., Norfolk Co., to Bowdoin Plumbing & Heating Co., 167 Charles St., Boston. Est. under $50,000.

†**Michigan**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est. $70,000 incl. equip.

†**Missouri**—Defense Plant Corp., 811 Vermont Ave., N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland. Est. $70,000 incl. equip.

†**New Jersey**—U. S. Eng., 6 and Walnut Sts., Phila., Pa., altering bldg., Atlantic Co., to Schaefer & Counins Co., 1600 Arch St., Phila., Pa. Ranking & Kellogg, Presser Bldg., 1717 Sansom St., Phila., Pa., archts.

†**New Jersey**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg. addn., to H. K. Ferguson Co., 25 W. 43 St., New York, N. Y. $100,000. Metal & Thermit Corp., lessee.

★†**New York**—U. S. Eng., 120 Wall St., New York, bldg. facilities, Orange Co., to Iglehart, Caldwell & Scott Inc., 90 Broad St., New York. $500,000-$1,000,000.

†**New York**—Industrial Company, steel, concrete mfg. plant, to Turner Constr. Co., 420 Lexington Ave., New York. Est. $200,000. Defense Plant Corp. will finance. Russell Hohl & Doremus L. Mills, Rome, structural and genl. engrs. S. L. Gerwig, Rome, consultant on bldgs.

†**New York**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., plant, to Brown & Matthews, Inc., 122 E. 42 St., New York. Air Reduction Sales Co., 60 E. 42 St., New York, lessee. CD 9/24—ENR 10/1.

★†**New York**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., Queens Co., to H. K. Ferguson Co., 25 W. 43 St., New York, $2,000,000, incl. equip.

†**New York**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est. $70,000 incl. equip.

★†**New York**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est. $2,000,000 incl. equip.

†**North Carolina**—U. S. Eng., Charlotte, bldg., Union Co., to J. J. Jones Constr. Co., 209 W. 4 St., Charlotte. Bids 10/7.

★†**N. C., Wilmington**—Wilmington Housing Auth., general contract 836 dormitory apartments and 200 dormitory rooms with community facilities, NC-21029 and 21072, for NHA, to V. P. Loftin Co., Builders Bldg., Charlotte, est. $2,159,000 plus fixed fee $75,000. CD 8/19—ENR 8/27, under CA.

★†**Ohio**—Industrial Company, mfg. plant, to Turner Const. Co., 420 Lexington Ave., New York. Defense Plant Corp. will finance. CD 9/19—ENR 9/24.

†**Ohio**—Industrial Company, fire pump houses, water storage tanks, concrete fdns., to Faulkner Constr. Co., 1150 Griswold St., Detroit, Mich. Est. $50,000-$100,000. Federally financed. CD 9/22—ENR 9/24.

†**Ohio**—U. S. Eng., Wright Field, Dayton, bldgs., Greene and Montgomery Counties, to H. W. Miller, Covington, Ky., under $100,000 each.

†**Ohio**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland. Est. $70,000 incl. equip.

†**Ohio**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland. Est. $70,000 incl. equip.

★†**Oklahoma**—U. S. Eng., 416 Wright Bldg., Tulsa, bldgs., grading, all underground utilities, except electric distr., No. 957-Neg 43-55, to A & B Constr. Co., Box 111, Wichita, Kan., $1,000,000-$5,000,000. CD 9/30—ENR 10/9, under LB.

†**Pennsylvania**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg. addn., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. $100,000. Vulcan Detinning Co., lessee.

†**Pennsylvania**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est. $70,000, incl. equip.

†**Pennsylvania**—Industrial Company, general contract, 3 story, 40x60 ft. brick, tile, reinf. con. office, laboratory and convenience bldg., Allegheny Co., to Rose & Fisher, 3215 McClure Ave., N.S., Pittsburgh. Est. $100,000-$500,000. Federally financed. Bids 9/7. CD 8/31—ENR 9/3.

†**Rhode Island**—U. S. Eng., 819 Industrial Trust Bldg., Providence, bldg., Inv. 699-43-69, Newport Co., to E. Turgeon, 814 Turks Head Bldg., Providence. Est. under $50,000. CD 9/30—ENR 10/3.

†**Rhode Island**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est. $70,000 incl. equip.

†**South Carolina**—U. S. Eng., Fort Jackson, bldgs., Richland Co., to C. G. Shockley, 1325 Main St., Columbia. Bids 10/7.

†**Tennessee**—U. S. Eng., 306 U. S. Courthouse, Nashville, bldgs., Montgomery Co., to O'Driscoll & Grove, Inc., 247 Park Ave., New York, N. Y.

★†**Tennessee**—U. S. Eng., P. O. Box 97, Memphis, bldg. addn., No. 1092-43-96F, Shelby Co., to Henke Constr. Co., Shotwell St., Memphis, $1,000,000-$5,000,000. CD 10/9—ENR 9/24.

†**Texas**—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O., $700,000 incl. equip.

★†**Texas**—Pub. Housing Auth., NHA, Electric Bldg., Fort Worth, demountable housing, Tex. 41172, to W. S. Bellows Constr. Co., Bankers Mortgage Bldg., Houston $5,933,573. Bids 10/6. CD 9/17—ENR 9/24.

★†**Texas**—U. S. Eng., 231 W. Main St., Denison, housing, Deaf Smith Co., to R. J. Brydon and S. J. Churchill, 5836 Reiger St., Dallas, $1,000,000-$5,000,000. CD 9/2—ENR 9/10, under LB.

★†**Texas**—U. S. Eng., 231 W. Main St., Denison, housing, Gray Co., to Randall Constr. Co., 925 Liberty Bank Bldg., Dallas. $500,000-$1,000,000. CD 10/6—ENR 10/8.

★†**Texas**—U. S. Eng., 231 W. Main St., Denison, 1 and 2 story, frame bldgs. Sol. 257-43-74, Gray Co., to Randall Constr. Co., Amarillo and J. L. Foxworth, 4403 De Loache Ave., Dallas, $1,000,000-$5,000,000. CD 9/30—ENR 10/8, under LB.

†**Texas**—U. S. Eng., Fort Sam Houston, bldg., Spec. 42-479 T2-1, Kinney Co., to L. Christy, 503 Builders Exch. Bldg., San Antonio, under $500,000. CD 9/22.

†**Texas**—U. S. Eng., Fort Sam Houston, military project, Brown Co., to C. H. Oehler, 1005 Travis Bldg., San Antonio, $100,000-$500,000.

†**Texas**—U. S. Eng., Fort Sam Houston, general contract civilian war housing, incl. streets, sidewalks, underground utilities, fencing, Spec. 42-307, Bell Co., to R. D. Jones Const. Co., 514 Thomas Bldg., Dallas, $100,000-

PUBLIC BLDGS. (Contracts Awarded, Cont'd.)

$500,000; electrical work, to Paul Wright Electric Co., 1018 S. Presa St., San Antonio. (**Correction**—general contractor). CD 9/3—ENR 9/10 under CA.

★**†Texas**—U. S. Eng., Fort Sam Houston, bldgs., Taylor Co., Spec. 42-251, to Rose Constr. Co. and C. B. Oates, Abilene, **$500,000-$1,000,000.** CD 10/7, under LB—ENR 10/8, under BA.

†Tex., Fort Worth—Fort Worth Ind. School Dist., war industry vocational mechanical shop, Tex. 41-500, to C. Epperly, electrical work to Shotts Electric Co., 905 Throckmorton St. Total est. **$65,500. FWA.** CD 10/6—ENR 10/8.

★**†Washington** — Tacoma Housing Auth., Tacoma, permanent housing, Project 45014 and temporary housing, Project 45014, for NHA, to J. C. Boespflug, Securities Bldg., Seattle, **$6,000,000.** Bids 9/21. CD 9/25—ENR 10/1, under LB.

†Washington—U. S. Eng., 800 3 Ave., Seattle, bldg., King Co., to General Constr. Co., 3840 Iowa St., Seattle. **$100,000-$500,000.**

†Wisconsin—Defense Plant Corp., 811 Vermont Ave. N.W., Wash., D. C., bldg., to H. K. Ferguson Co., 1650 Hanna Bldg., Cleveland, O. Est. **$70,000** incl. equip.

Alta., Suffield—Dpt. Natl. Defense, Ottawa, Ont., barracks, officers and N. C. O's quarters, mess and storage hall, recreational bldg., etc., to Bennett & White Constr. Co., Ltd., 302 Examiner Bldg., Calgary, **$300,000.**

N. S., Sydney—Dpt. Natl. Defense, Ottawa, Ont., barracks, mess halls, admin. bldg., officers and N. C. O's quarters, etc., to Chapells Ltd., 62-80 Brookland St., **$400,000.** CD 1/6—ENR 1/9.

Ont., Barriefield—Dpt. Natl. Defense, Ottawa, frame double hut, R.C.O.C. Training Camp, to W. C. Brennan Contg. Co., Ltd., 400 Gage Ave., Hamilton, **$300,000.** CD 9/16.

Ont., Monteith—Dpt. Natl. Defense, Ottawa, 29 addnl. bldgs., Military Camp, to Hill-Clark-Francis, Ltd., Whitewood Ave., New Liskeard, **$300,000.** CD 9/4.

Ont., Trenton—Dpt. National Defense for Air, Ottawa, barracks, mess halls, etc., R.C.A.F. Station, to Hill-Clark-Francis, Ltd., Whitewood Ave., New Liskeard, **$400,000.**

COMMERCIAL BUILDINGS

PROPOSED WORK

California—Industrial Company, plans by W. G. Corlett, 1801 Bank of America Bldg., Oakland, nursery school also 30 room school, adjacent Nystrom School; making plans, 2 story dormitory.

★**Ind., Evansville** — Columbia Apartments, Inc., T. I. Stein, mgr., 18 Court Bldg., 360 unit brick, wood apartment bldgs. $1,250,000.

Ky., Glendale—Kentucky Baptist Childrens Home, E. F. Glenn, supt. school, addnl. chapel, hospital and recreational bldg.

N. J., Dover—Schapowal Constr. Co., 1533 Waring Ave., New York, N. Y., plans by L. Kurtz, 15 W. 44 St., New York, N. Y., thirty 1½ story frame residences. $150,000.

Pennsylvania—E. E. Olsen Co., Clairton Rd., Pittsburgh, plans by H. D. Waterson, 709 Renshaw Bldg., Pittsburgh, thirty-five 2 story, bsmnt., 22x27 ft., brick, frame residences, Jefferson Twp., Allegheny Co. $175,000.

Pa., Meadville—Joseph Rey & Son, 383 North St., forty 1 story, prefabricated frame residences. $180,000.

R. I., Cranston—St. Matthews Roman Catholic Parish, Rev. W. P. Talley, 43 Main St., Scituate, plans by A. J. Murphy, 58 Weybosset St., Providence, 2 story, bsmnt., brick school. $150,000.

S. D., Rapid City—P. E. Bellamy, Rapid City, plans by A. L. Forrette, 1113 St. James St., 40 unit housing. $160,000.

BIDS ASKED

Conn., Fairfield—Owner, c/o H. O. Chapman Jr. and R. Evans, 140 Nassau St., New York, N. Y., seventy-eight 1 story, **24x32** ft. frame houses. $400,000.

CONTRACTS AWARDED

Calif., Oakland—Valley & Lincoln, Inc., 750 Dowling Blvd., San Leandro, fifty 1 story frame residences, 83 and 84 Aves. Owner builds. **$150,000.**

Calif., Oakland—Western Pacific R.R., T. L. Phillips, ch. engr., 526 Mission St., San Francisco, commissary bldg., to A. T. Beckett, 366 40 St.

Calif., Pittsburg—R. P. Cataline, 1075 Cumberland St., 55 residences. Owner builds. **$220,000.**

Calif., Pittsburg—A. V. Davi, 771 Central Ave., 55 residences. Owner builds. **$220,000.**

Calif., Pittsburg—B. E. Enes, R.F.D. Box 480, 46 residences. Owner builds. **$184,000.**

Calif., Pittsburg—V. W. Pacini, 436 Railroad Ave., 56 residences. Owner builds **$224,000.**

Calif., Richmond—Defense Constr. Inc., 198 Mississippi St., San Francisco, 1 story frame duplex residences. Owner builds. **$150,000.**

Calif., Richmond—Walker-Built Homes, Inc., 401 Spruce St., Berkeley, 62 frame residences. Owner builds. Electrical work, to Preston A. Jones, 17 Eldridge Court, Berkeley and Rochester Electric Co., 2138 University Ave., Berkeley. Est. **$248,000.** P. Hammarberg, 2 Norwood Dr., Berkeley, archt.

Calif., Sausalito—W. A. Bechtel, 155 Sansome St., San Francisco, 6 office bldgs., to A. P. Fisher, 300 Montgomery St., San Francisco.

Calif., Vallejo—J. W. Caughey, 520 Georgia St., fifty 1 story frame residences, 12 business bldgs., Hobbs Manor, Napa Rd. and Flosden Ave. Owner builds. **$248,000.**

Conn., Plainville—John Cooke Co., 75 Main St., frame houses, Linden St., to De Luca Constr. Co., 322 Main St., Stamford. Est. **$150,000.** CD 9/15—ENR 9/17.

★**La., Monroe**—P. L. Minden & Associates, Minden, and J. A. Harper, Crowville, 170 housing units, Monroe St. between Park and Forsythe Sts., own forces. **$800,000.**

Mass., Pittsfield—Hillcrest Surgical Hospital, Pittsfield, 2 story, bsmnt., brick, steel hospital, to Lindholm Constr. Co., 1277 East St. Est. **$200,000.**

N. J., Belleville—Corbin Garden, Inc., 50 Court St., Brooklyn, N. Y., twenty-eight 2 story, bsmnt., frame, brick veneer garden apartments, separate contracts. Seelig & Finkelstein, 153 Pierrepont St., Brooklyn, N. Y., archts.

N. J., Somerville—B. and H. Nelloss, 33-43 Bell Blvd., Bayside, N. Y., eight 2 story brick veneer garden apartments, to H. B. Constr. Corp., 33-43 Bell Blvd., Bayside, N. Y., **$400,000.** CD 9/1—ENR 9/3.

O., Cleveland—M. Helper & Son, Inc., 719 Natl. City Bank Bldg., 90 frame houses. Owner builds. **$450,000.** CD 6/24—ENR 7/2.

O., Cleveland — Shaker Boulevard Apartments Co., c/o H. Galvin, Guardian Bldg., carpentry work seven 2 story, bsmnt., 38x68 ft. apartment bldgs., to M. Burkons, 7113 Euclid Ave.; masonry work, to A. Immermino, 3779 E. 147 St. Est. **$210,000.** Geo. Walters, 1836 Euclid Ave., archt.

★**Manitoba**—Owner c/o contractor, bldgs. and ground development, to Tomlinson Constr. Co., Ltd., 2 Somerset Bldg., Winnipeg, **$800,000.**

INDUSTRIAL BUILDINGS

PROPOSED WORK

Ark., Osceola—COTTON GIN—Producers Cooperative Gin, Osceola, cotton gin. $50,000.

California—DAIRY, etc.—Humphrey Estates, Inc., Cascade Ranch, near Pescadero, rebuilding 3 dairy bldgs., incl. refrigeration bldg. San Mateo Co. **$40,000.**

Ind., Princeton — CAR SHOPS — Southern Ry., B. Herman, ch. engr., **Wash.**, D. C., rebuilding car shops destroyed by fire. **$50,000** incl. equip.

Mich., Battle Creek—FACTORY—Simmons Stoker Co., Battle Breek, plans by A. B. Channel, Battle Creek, 1 story, 43x138 ft. and 56x120 ft., brick, concrete factory, plain fdn. $100,000.

★**Neb., Omaha**—FOUNDRY—Omaha Steel Works, 609 S. 48 St., brick, concrete foundry addn. $700,000.

N. Y., Utica—FACTORY—Utica Radiator Corp., 2201 Dwyer Ave., plans brick, steel, concrete factory addn. Giffels & Vallet, 1,000 Marquette Bldg., Detroit, Mich., engrs. $250,000.

Pennsylvania—FACTORY—Genessee Chemical Co., C. Carpenter, genl. mgr., Genessee, rebuilding factory. $50,000.

Pa., Danville—SHOP, etc.—Follmer Trucking Co., Danville, 1 story service and repair shop, loading platform, office addn. **$40,000.**

Wis., Antigo—WAREHOUSE—A. H. Weinbrenner Co., 226 E. Juneau Ave., Milwaukee, plans by H. Olk, Antigo, 1 story, concrete block warehouse, concrete fdn.

Wis., Marshfield — WAREHOUSE — Blum Bros. Box Factory, 137 W. 9 St., plans by G. A. Krasin, Marshfield, 2 story, 51x89 ft., brick warehouse, concrete fdn.

B. C., Vancouver—FACTORY—Moulded Plydoows, Ltd., 1852 W. Georgia St., factory.

B. C., Vancouver — PLANT — Vermiloils Ltd., 800 Hall Bldg., mining and smelting plant. $50,000.

B. C., Victoria — PLANT — International Metals Ltd., 101 Pemberton Bldg., mining, milling, refining plant. $50,000.

Man., St. Boniface (W... Swift Canadian Co., Ltd. ... —PLANT— W., Toronto, Ont., bids ... Clair Ave. Princess and Henry Sts. ... addn.

Ont., Bruce Mines—PLAN... Products Ltd., Bruce M... $10,000.

Ont., Fenelon—PLANT—A... ucts, Ltd., Fenelon, wood ... Wood Prod... plant.

Ont., London—FACTORY—... ing Co., A. H. Murphy, ... St., factory. $45,000. ... Die Cast... 267 Dundas

Ont., Ottawa — PLANT — ... Owens Co., Ltd., 527 Su... addnl. cinder block bldgs. ... $50,000. ... Hughes bids soon ... concrete fdns.

Ont., Toronto—PLANT—M... Syndicate, Ltd., c/o R. H. ... Ont., mining and milling plant. ... Springfield $40,000.

Ont., Toronto—PLANT—... Ltd., c/o Geo. A. Mason, ... ing plant. $40,000. ... Produce woodwork

Que., Montreal East—PLANT—... Ltd., Canada Cement Bldg., ... 12x51x60 ft. brick plant addn. ... B A Oil Co. Montreal rein.-con. fdn.

Que., St. Johns — PLANT — ... archt., 110 Champlain St., bids soon, 1 story, 120x180 ft., concrete brick plant, for Dominion Spinners, Ltd., St. Joseph Blvd. $45,000. ... E. Benoit

BIDS ASKED

Bids Asked October 13

N. J., Lyndhurst—BOILER PLANT—Leslie Co., Grant Ave., boiler plant, P. Wunderlich, 70 E. 45 St., New York, N. Y., engr.

Bids Asked

Wis., Union Center — PLANT — Wisconsin Co-operative Creamery Assn. Dist. 2, 1 and 2 story, 68x123 ft. plant with 18x70 ft. wing, brick, tile, concrete fdn. $114,000. Klinger & Hubbard, 409 Culver Bldg., Eau Claire, archt.

Ont., Malton — FACTORY — National Steel Corp. Ltd., Kenilworth Ave., Hamilton, 60x180 ft. factory, $50,000. H. H. Augus, 1221 Bay St., Toronto, mech. engr. J. W. Cockburn, 42 Jane St. N., Hamilton, electrical engr.

CONTRACTS AWARDED

Connecticut—TEST BUILDING—Industrial Company, test bldg., to Turner Constr. Co., 420 Lexington Ave., New York, N. Y. Albert Kahn Associate Archts. and Engrs., 345 New Center Bldg., Detroit, Mich., archts.

Mass., Springfield—PLANT—Smith & Weston, 55 Stockbridge St., 2 story, bsmnt., 96x165 ft. storage and mfg. plant, to E. F. Carlson, Inc., 1649 Main St. Est. **$45,000.**

Michigan—FACTORY—Industrial Company, 1 story, brick, steel, concrete factory, plain fdn., to Barton Malow Co., 2631 Woodward Ave., Detroit. Est. approx. **$100,000.** Malcomson, Calder & Hammond, 1213 Griswold St., Detroit, archts.

N. J., Jersey City—FREIGHT STATION—Penn. R.R., C. E. Adams, ch. engr., Penn Sta., 33 St. and 8 Ave., New York, N. Y., 1 story, 102x400 ft., rein.-con., corrugated siding, steel freight station, to Stillman, Delehanty Ferris Co., foot Morgan St., **$50,000.** H. K. Smith, 921 Bergen Ave., archt.

N. J., Nutley and Clifton—PLANT—International Telephone & Telegraph Corp., 67 Broad St., New York, N. Y. (1st unit), plant, to Turner Constr. Co., 420 Lexington Ave., New York, N. Y., **$45,000.** CD 5/19—ENR 5/21.

Pa., Phila.—PLANT—SKF Industries, Front and Erie St., 1 story, 105x107 ft. plant, to Turner Constr. Co., 420 Lexington Ave., New York, N. Y. Est. **$120,000.**

Tenn., Chattanooga — PLANT—Chattanooga Stamping & Enameling Co., plant, to James Verhey Constr. Co., 3815 Monte Vista Dr., R. H. Hunt & Co., James Bldg., archt.

Wis., La Crosse—PLANT—Swift & Co., Stock Yard, Chicago, Ill., electrical for 1 story, 43x82 ft. powdered milk plant and 1 story, 18x40 ft., boiler house, to Clark-Bracken, Inc., La Crosse. CD 7/22—ENR 7/30 under CA.

Wis., Platteville—WAREHOUSE—Iowa Egg Products Co., Platteville, 1 story, bsmnt. 35x100 ft. concrete block warehouse, concrete fdn., to E. Kolfenbach, 794 Seminary St., Dubuque, Ia. Cullen & Bartels, 210 Lincold Blvd., Dubuque, engrs.

Ont., Georgetown—PLANT—Smith & Stone, Ltd., Georgetown, porcelain plant, Lot 19, Concession 9, to J. B. MacKenzie & Son, James St., about **$60,000.** CD 9/4—ENR 9/17.

★**Ont., Haley Station**—PLANT—Dominion Magnesium Ltd., 18 Rideau St., Ottawa, plant addn. $500,000.

Ont., Leamington—PLANT—H. J. Heinz Co. of Canada, Erie St., 20x100x100 ft., concrete plant, own forces. **$61,000.** Awarded 10/6. CD 10/5.

Que., Mount Royal (Postal Dist. Montreal)—PLANT—Canadian Marconi Co., Ltd., 2440 Trenton Ave., 70x160 ft. and 50x50 ft. concrete, brick plant addns., Trenton Ave., to A. F. Byers Constr. Co., Ltd., 1226 University St., about **$150,000** incl. equip. CD 9/21—ENR 10/1, under Montreal.